THE BRITISH PTERIDOLOGICAL SOCIETY

BULLETIN

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Edited by A.M. Paul

THE BRITISH PTERIDOLOGICAL SOCIETY

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The BRITISH PTERIDOLOGICAL SOCIETY was founded in 1891 and is still a focus for fern enthusiasts, its wide membership including gardeners, nurserymen and botanists, both amateur and professional. It provides a wide range of information about ferns through its publications and website, and also organises indoor and field meetings, garden visits, a plant exchange, a spore exchange and fern book sales. The Society's journals, *The Fern Gazette*, *Pteridologist* and *Bulletin*, are published annually. *The Fern Gazette* publishes matter chiefly of specialist interest on international pteridology, the *Pteridologist*, topics of more general appeal, and the *Bulletin*, Society business and meetings reports. **Website: www.eBPS.org.uk**

Membership is open to all interested in ferns and lycophytes. **SUBSCRIPTION RATES** (due on 1st January each year) are Full Personal Members £25, Personal Members not receiving *The Fern Gazette* £21, Student Members £12.50, Subscribing Institutions £42. Family membership in any category is an additional £2.50. **Overseas postage** for all journals is an extra £10 (Europe) or £12 (Rest of the World), or for those not receiving *The Fern Gazette* £6 and £8 respectively. We welcome online applications, or contact the Membership Secretary (address above). **Standing Order** forms are available on the BPS website or from the Membership Secretary.

(**Front cover**: *Polystichum lonchitis*. Illustration from: Anne Pratt (1855) *The ferns of Great Britain, and their allies the club-mosses, pepperworts, and horsetails*.)

Back numbers of *The Fern Gazette*, *Pteridologist* and *Bulletin* are available for purchase from P.J. Acock, 13 Star Lane, St Mary Cray, Kent BR5 3LJ; E-mail: BackNumbers@eBPS.org.uk

THE

BULLETIN

OF THE

BRITISH PTERIDOLOGICAL SOCIETY

Vol. 9 **2020** **No. 1**

INTRODUCTION TO THE 2020 *BULLETIN*

Alison Evans

Welcome to this issue of the *Bulletin*, recording perhaps the most extraordinary year that most of us have lived through. When we were forced to cancel almost all our meetings last year, we were concerned that the 2020 *Bulletin* would be a very meagre document indeed. I am pleased to say that through the efforts of the Editor, Alison Paul, and contributions from various members, we have been able to produce an informative document detailing our activities through lockdown.

As with many other plant societies, we have increased our online presence. People who previously thought that social media platforms such as Facebook were not for them, have discovered the great potential of online interest groups. In addition to our Facebook Fern World page, there are specialist *Dryopteris*, *Athyrium*, *Polypodium* and *Polystichum* groups, where people are easily able to share pictures of their plants. There are also some lovely fern images on Instagram and Flickr. All of these can be accessed via the BPS website. As a result of these various platforms, we have all been able to see ferns in the wild, in Botanic Gardens, and the treasures that many of our members are growing, and not just in the UK.

We have a YouTube channel with several videos on garden ferns, and also a demonstration of how to make cyanotypes using ferns. This was a 'lockdown' project developed by our Publicity Officers Sophie Walwin and Franziska Wittenstein in the summer of 2020. This can still be accessed, and we would love to see any cyanotypes that you make. New cards for our merchandise were based on cyanotype fern designs, and helped to make 2020 a very successful year for merchandise.

December 2020 saw the first online lecture as a joint venture between the BPS and the Hardy Fern Foundation based in Seattle. This was so successful that the programme has been extended until April 2021. Details are on the BPS website. We have also been holding our committee meetings online, as well as our 2020 AGM. The 2021 AGM will move back to April, but will still be held online, with two short talks afterwards. We feel that this is the safest way to proceed until most of us are vaccinated and the number of new Covid-19 cases drastically reduced. We are hoping that

photo: David Hill

2020 AGM via Zoom

we may be able to start at least our regional meetings again from July onwards, providing that regulations on travel and on numbers of people meeting have been relaxed. The resumption of face-to-face meetings will be reviewed again at the May Committee meeting. Participation in RHS and Plant Heritage events during 2021 will be left to individual members to decide.

Our new Fern Monitoring Group was active during 2020, mostly planning and producing protocol documents. Their report for 2020 is on page 53. Monitoring helps us to see how fern populations are changing, possibly in response to climate change. The great reduction in travel during 2020 reduced our carbon footprint as a Society, and at our AGM we discussed other ways that the Society can encourage greater sustainability. We have moved away from single-use plastic for journal packaging, and we should also be encouraging members to avoid peat-based composts.

Several informal, socially distanced fern trips were held after travel restrictions were eased, some of which are reported in this *Bulletin*. We also have articles on BPS meetings through the ages, and a history of the South-East Group.

2020 was a difficult year for everyone. I would like to express my thanks to our members and volunteers who have supported the Society throughout. Please stay safe all of you. Looking forward to seeing many of you when we are allowed to meet again.

EDITORIAL – GRID REFERENCES

Alison Paul

This issue of the *Bulletin* is the start of a new volume, which seems an appropriate point at which to change the way Ordnance Survey (OS) grid references are cited in reports. Hoorah! I can hear some of you saying! Hitherto I have used the format 31/123123. However, the first two numbers seem to be a source of puzzlement to some and annoyance to others...

The National Grid divides Great Britain into 100 km squares. These are further subdivided to give 10 km squares and again into 1 km squares, which is the grid you see on an OS map. At each level, the grid lines are numbered from 0 to 9, both west to east (Eastings) and south to north (Northings). The first two characters of a National Grid reference (NGR), be they numbers or letters, denote the 100 km square. The use of numbers was once relatively common, but they have fallen out of favour; I have always preferred them as one can picture from those its location in GB, whereas the letter equivalents are less visual. All OS maps give the 100 km grid numbers regularly along the axes. GPSs may also give full X and Y coordinates (Eastings and Northings) as e.g. **3**22105, **1**64847; this is the same as **31/**22105 64847 or **ST**22105 64847. Converters are available on the Internet (also to convert to or from latitude and longitude).

When including grid references in *Bulletin* reports it is worth considering how they may be used by readers, as well as sensitivity of the records, to decide the appropriate precision. A full GPS reference is often neither necessary nor desirable. It can be useful to have a reference for the parking location or at least for the start of the route taken. In many cases six-figure references for the general area explored will be sufficient, but the greater precision of an eight-figure NGR can be helpful and even ten-figure references (one metre square) for particular plants may be appropriate if you trust the accuracy of your GPS. **Please note** that if you have a ten-figure NGR, and you only need an eight or six-figure reference, the unnecessary numbers should be 'knocked off' (e.g. ST12789 12789 would become ST127127). **Do not round up** the number as this puts the record into the next square!

I do check many, but not all, grid references in *Bulletin* reports and it is surprising how many are erroneous in some way! An incorrect NGR is worse that no reference at all, as it may send someone on a wild goose chase! **Please check them** before submitting reports! My favourite website for checking NGRs is currently **Cucaera**, which has OS maps of different ages and scales as well as satellite imagery, and gives altitudes and vice-counties. In the past I have used **Streetmap.co.uk, Grab a Grid Reference** and **Where's the Path?** All have slightly different features, e.g. in some you can see the OS map and aerial photograph side by side. For Ireland, which has a separate grid, this site is very good: **Irish.gridreferencefinder.com/**

SOCIETY MEETINGS – AN OVERVIEW

Martin Rickard

2020 was possibly the first year since its foundation during which the Society held no meetings. This sad fact caused our Editor, Alison Paul, to wonder about Society meetings through the ages and asked me as one of our longer term members, if I would like to look into an overview. It turned out to be an interesting challenge.

Before 1968 I attended no meetings, so where to start? I have chosen 1870, when the first British Pteridological Society was formed. A controversial decision to start here and not 1891, when our present Society was formed, but I think it is relevant to fern lovers and our Society. From 1870 until its demise in 1876 this form of the Society held monthly meetings, usually at Mr Thompson's home in what is today part of the Victoria and Albert Museum. I say usually because in the single known publication produced by the Society in 1875 they describe meetings in the homes of Dr Allchin (Bayswater Road, Central London), Mr Wollaston (Chislehurst, south-east of London) as well as Mr Thompson. Specimens were sent in for exhibition and lectures were sometimes given. Other visits were to Captain Jones, and Mr Fox at Brislington over a three-day period (both in the Bristol area). Presumably taking place in 1874, this excursion would count as the first known official meeting out of doors for any Fern Society.

The 15 year interval between the closing of the original society and the formation of the current one was not totally wasted as Captain, later Colonel, Jones continued to honour the obligation to keep producing the promised prints to the 44 subscribers of his nature prints. He finished the task in 1880. No doubt several of these members were in touch with each other and some swiftly joined our new Society. Sadly the Colonel, along probably with many others, did not survive to see the Society reborn, but some other leading pteridologists did, viz. G.B. Wollaston, P. Neill Fraser and W.H. Allchin, J.M. Barnes (father and/or son), G. Stabler

photo: from *BPS Abstracts and Reports*, 1900

In what looks like a garden, *c*. 1899. Dress less formal than below – perhaps field attire?

Back: W. Wilson, J. Lovelady, W. Martin
Centre: G. Whitwell, W.R. Boyd, S. Hudson, J. Wiper, W. Troughton, J. Edwards, W.H. Atkinson, J.W. Walton, J. Garnett, J. Gott, T. Bolton
Front: Rev. G. Gunn, W.H. Phillips, J.J. Smithies, C.T. Druery, W. Aldred, J.A. Wilson

and E.J. Lowe all offered to join the new society in 1893 and joined in 1894. W.H. Phillips was in contact with the original Society but did not join for travel reasons – he lived in Belfast. There were no doubt also non-celebrity members who joined both societies.

Once the new society became established, meetings were largely confined to the AGM. Apart from Society business many very interesting papers on cultivars of British ferns were read, and specimens were brought in for naming or discussion. These very early meetings were initially at Bowness-on-Windermere in north-west England. For several years I can find little evidence of field excursions other than some local explorations and one or two group photographs posed in rocky quarries or gardens. By 1910 the membership obviously felt they had found everything of fern interest at Bowness and switched that year's meeting to Moffat in southern Scotland where the fern flora would be different. The 1911 meeting was at Barnstaple in Devon and local excursions were made to Woody Bay and Heddonsmouth; several minor cultivars were collected by Dr Stansfield, Charles Druery and W.B. Cranfield.

photo: from *BPS Abstracts and Reports*, 1900

The AGM group in the Quarry near Bowness, presumably posed in 1899

A bit smarter than the garden picture above. Maybe dressed for the AGM here.

Back: W. Troughton, R. Whiteside, G. Whitwell, W. Wilson, J. Wiper
Centre: J. Garnett, J. Stewardson, J. Gott, Dr F.W. Stansfield, W. Bell, T. Clark, J.A. Wilson, J. Eadon
Front: R. Whiteside, W.H. Phillips, R. Tyldesley, C.T. Druery

photo: James Sinclair

'Antiquities at Sidmouth', Devon, 1934

Back: W.B. Cranfield, F.W. Thorrington
Front: Robert Bolton, T.B. Blow, J.J. Sheldon, J.A. Sinclair, T.E. Henwood, F.W. Stansfield.

This format seemed to be the norm through the war years and the twenties. Sadly many – of the original members were dying, notably Charles Druery, and by the thirties the membership was getting ever slimmer, another hammer blow being the death of Dr Stansfield shortly before World War II. The Society shut down during the war, with obviously no meetings and by 1948 the winding up of the society was seriously considered. It was only Jimmy Dyce's determination that kept it going. He wrote to all the pre-war members asking them to re-join. Of course many had died but Jimmy gathered in enough members to keep going.

photo: from 1937 *British Fern Gazette* Vol. 7, No. 4

Dr F.W. Stansfield and Mr T.E. Henwood in a country lane, 1930s

These close friends sadly both died in February 1937

photo: BPS Archive

1959 Annual Meeting, based in Ambleside, Lake District
Jim Crabbe, Jimmy Dyce, Percy Greenfield

Not surprisingly, the fifties were a weak period for the Society. All the great fern men had gone and the reduced membership did not make ideal circumstances for many meetings. In 1952 there was no field excursion with the AGM, but three members – Jimmy Dyce, Percy Greenfield and Peter Temple – had an enjoyable stroll around the lanes of east Devon. Jimmy and Percy Greenfield revisited east Devon in 1953 though other members unfortunately had to drop out. I'm not sure if these meetings could be described as Society meetings, but they were all organised by Jimmy Dyce, and I think all members were invited. In successive years there were meetings in Borrowdale (1954) and Kendal (1955) in the Lake District, and Wellington (1956) and Wiveliscombe (1957) in Somerset. Visits to RHS Wisley were also a feature during this period.

photo: BPS Archive

1959 Annual Meeting, based in Ambleside, Lake District
Jimmy Dyce, James Davidson, Prof. Eric Holttum, Percy Greenfield, Norman Robinson, Jim Jackson, Fred Jackson

In 1957 there was a shift in emphasis. Up to this point the hunt for cultivars dominated but in September 1957 the Society joined forces with the Botanical Society of the British Isles to record ferns in the Sussex Weald near Tunbridge Wells. The emphasis was on species, although some kept their eyes open for cultivars. For about the next twenty years, into the 1970s, this Sussex meeting became an almost regular annual feature, either just for a day or for the weekend. But in 1958 the keen cultivar hunters were back in east Devon for a week based at Axminster. In 1959 it was back up north to Ambleside in the Lake District for the week by which time the dual interest of looking for cultivars and recording species continued happily side by side.

photo: BPS Archive

1959 Annual Meeting, based in Ambleside, Lake District

Norman Robinson, Fred Jackson, James Davidson, Jimmy Dyce, Jim Jackson (son of Fred)

Through the 1960s field activity gathered speed, driven by Jimmy Dyce, and the Annual Excursion became a regular feature. In 1960 the Annual Excursion in West Somerset, and the Sussex meeting were joined by meetings at Brentwood in Essex and Thursley in Surrey, all in the south of England. Jimmy Dyce tried to get support for meetings in the north but at Bakewell only one person other than Jimmy turned up. Another meeting organised for Borrowdale was better supported, with five members attending. In the early sixties there were three to seven meetings annually. One popular semi-regular meeting started in this time – a meeting at Kew Gardens when Bert Bruty looked after the truly wonderful fern collection. Later on, John Woodhams took over as host for our Kew visits, which were always informative as well as memorable social occasions.

For many decades the Southport Flower Show had fern classes, nothing to do with our Society but in due course the Society ran a stand there every year. In the sixties and seventies it was manned by Jimmy Dyce, then Matt Busby took over for many years and more recently Michael Hayward took up the challenge, winning several Gold Medals for the Society exhibit. Over the years the Society stand has become a meeting point for members, as well as an opportunity to recruit new members.

The Society's first trip overseas was in 1965. The location was Austria and the group of 20 plus travelled mainly by train to Graz. The principal organiser was Peter Halligey. Unfortunately no other international extravaganza followed until some 25 years later. Next

year it was back down to earth with 13 members and friends attending the AGM and excursion in Bovey Tracey, Devon.

All field meetings that I can find documented up to 1965 were either in Devon, Somerset, Sussex, Surrey, the Lake District or Austria. Nothing in Yorkshire, or Scotland apart from Moffat, and nothing in Wales or East Anglia. This policy was extraordinarily blinkered but over the next 30 years things changed, with meetings taking place throughout the UK.

photo: BPS Archive

Collecting *Isoetes* – Strathyre, Perthshire, 1989
Alison Paul and Clive Jermy modelling the first BPS tee-shirts, which Anthony Pigott had organised in 1988

The first I knew of the Society was when my friend Tony Worland joined early in 1967. Immediately he joined the Annual Meeting to Kettlewell in Yorkshire. He came back with tales of a load of rather strangely out-of-date old boys. He was particularly impressed by Frank Brightman in his plus fours and 65-year-old Jimmy Dyce in his shorts, but he also found it odd to obey Jimmy's rule that everyone was to be referred to by Christian names despite age gaps of over 40 years and differing social status. Only 20 years before it had been all surnames even between good friends. On his return Tony told me all about the trip and convinced me I should join. I did.

Kettlewell was the first of the new generation of meetings in hitherto unexplored areas for the Society. It was fortunate for Tony and very soon afterwards for me and James Merryweather, that this development coincided with our joining as we were all primarily interested in species not cultivars, much to the disappointment of Jimmy!

The next year, in 1968, a poorly attended meeting on the Isle of Arran was followed by an excursion around Dalmally in the Scottish Highlands. Tony joined the Dalmally week, and again had a great time listing all the rarities he had seen. I was jealous and arranged my honeymoon that autumn in the same hotel! It rained all day, every day except the Sunday when we arrived – the joys of Scotland! By a piece of luck Hazel, my wife, had a keenness to visit Arran, so when another meeting was organised by Jimmy in 1969 to find the Killarney fern on the island, everything knitted together perfectly. I had my first first-hand experience of these 'strange old boys'. It was a wonderful meeting although we did not find the Killarney fern. The company was great, with Henry Schollick, Fred Jackson and James

Merryweather, and Tony of course, among the attendees. In total the Society held 13 meetings that year.

Tony by this time was an important man in the Society – he had been to three week-long meetings. Jimmy, aided by Dick Cartwright, had arranged virtually all meetings over the previous twenty years, but he co-opted Tony onto a Meetings Subcommittee. Tony asked my opinion about where we should go based on my interest in localities in the old fern books that I loved. Almost immediately I found myself the third member of the Meetings Subcommittee as Dick Cartwright took a back seat. It was great fun putting localities together, and Tony and I led our first meeting: to East Norfolk in July 1969, seeing the elusive *Dryopteris cristata* at Scoulton Mere. Sadly it has apparently disappeared since then due to management changes.

From 1970 to 2019 the meetings were scattered all over Britain and Ireland, from the Isles of Scilly to the Outer Hebrides, south-west Ireland to Northern Ireland and west Wales to East Anglia, plus the Isle of Man and the Channel Islands. Over these 50 years the number of meetings the Society organised increased to over 20 per year.

photo: Ray Smith

Kynance Cove, Cornwall, 1994

Back: Ray Smith, Keith Holly, Neil Timm, Andrew Leonard, Mick & Linda Craddock
Centre: Caroline Thomas, Margo & Anthony Pigott, Trish Craddock
Front: Brenda Smith, Barbara Porter, Rose Murphy, Jennifer Ide, Margaret Nimmo-Smith, Margaret & John Collins

In 1972 our first international symposium was held: 'Phylogeny and classification of the filicopsida' in London, jointly organised with the Linnean Society. This was not handled by our small meetings subcommittee for obvious reasons. Clive Jermy and his team of professionals took over and ran a very successful meeting. The next symposium, 'The biology of pteridophytes', was in Edinburgh in 1983 and was co-sponsored by the Royal Society of Edinburgh and the Linnean Society.

The Society has also organised several smaller symposia, in addition to the regular Spring and Autumn Indoor Meetings that have been a feature of our programme for almost 60 years. In 1980 there was a joint long-weekend lecture and field meeting with the BSBI at Brathay Field Centre near Ambleside; Frederic Badré from Paris gave his talk in French so it was a relief when Jacob Schneller from Zurich spoke in English! Adrian Dyer, Stuart Lindsay, Heather McHaffie and Chris Page organised a meeting on the 'Ecology and conservation of Scotland's rare ferns' in 1994 – two days of talks at RBG Edinburgh, followed by two days visiting great fern sites in the Central Highlands. Changing to a more horticultural theme, two years later Graham Ackers planned the thought-provoking 'Fern hardiness symposium', held at my home at Kyre Park in Worcestershire.

photo: Matt Busby

Fern Hardiness Symposium, Kyre Park. January 1996

Kate Pryor, Janet Sellers, John Collins, Dania Kowalska, Joan Ruston, Jon Sellers, Johannes Vogel *(back)*, Margaret Nimmo-Smith, Alison Paul, Barry Jackson, Andrew Leonard *(back)*, Alan Ogden, Hazel Rickard, Keith Holly, Fred Rumsey, Graham Ackers, Rita Coughlin, Barry Thomas, Ray Coughlin, Peter Lynch *(back)*, Lynda Thomas, Doreen Holly, Doreen Brotherton, Margaret Collins, Betsy Kohler, Martin Rickard, Clive Brotherton, James Merryweather, Peter Boyd, Jennifer Ide, Neil Timm, Anthony Pigott, Alastair Wardlaw. *Kneeling:* Rebecca Taylor, Mary Gibby, Marc Thomas, Jessica Barrett.

For some time the combined AGM and Spring Meeting have more-or-less alternated between London and the South-East and more northerly venues including Edinburgh. The Society's official address has been the Natural History Museum in London (formerly British Museum (Natural History) 'the BM') for many decades, and staff have kindly hosted Society meetings there since about 1951 when A.H.G. Alston of the Fern Herbarium was BPS President. RBG Kew and Chelsea Physic Garden have also been popular locations for London meetings. Talks have been wide-ranging, often travelogues, but also covering topics around cultivation or scientific aspects of ferns, fern books and fern-decorated items. Initially afternoon meetings, from about 1990 they expanded to include the mornings, although until the Committee's meetings were moved to different dates, they sadly missed this part of the programme. The Autumn Meeting has sometimes taken the form of a

themed 'mini-symposium', covering many subjects such as Xerophytic ferns, *Polystichum*, Tree ferns, Focus on spleenworts, Reproduction in ferns, and Fossil ferns.

In 1974, the first regional meeting was organised by Matt Busby, thus initiating the Midlands Group of the Society. From slow beginnings Matt built up a wonderful hard core of members who all became great friends. Apart from a short break in the early 2000s, Matt has continued these meetings to the present day, with some of the original members still attending. In 1975, Mary Potts in Somerset started the South-West Group meetings, which ran very successfully but sadly Mary went abroad in 1988. The group changed but continued with different titles and leaders. One highlight of Mary's meetings was the visit to Newcastle House, Bridgend, the home of Derek Fraser Jenkins. Derek laid on a magnificent lunch in the early seventeenth-century dining room, served by Welsh maids in waitress uniforms. Chris, Derek's son, assured us it was not like that every day! The Yorkshire Group was started at about the same time by James and Margaret Merryweather, but was strangely poorly supported and operations were suspended for a few years until in 1984 it morphed into the Leeds and District Group with Jack Bouckley at the helm, then back to Yorkshire Group again.

In due course the local group system became more and more popular with many groups forming. Today we have the following groups: Devon and Cornwall, South-East (England), East Anglia, North-West (England), South Wales and the Borders, North Wales, Manchester and the North Midlands, Yorkshire, Scotland, plus the Midlands and Wessex. Group names have changed over the years and the area covered by each group varies depending on the interests of the local members and where they live. All BPS members are welcome at any meeting of any group.

In 1991 the current Society celebrated its centenary in style! There was a four-day international symposium 'Cultivation and propagation of Pteridophytes' at Imperial College and RBG Kew, stands at the Chelsea Flower Show and Hampton Court Flower Show, a Centenary garden tour, Pebworth Flower Show and the Southport Flower Show. Matt Busby organised a wonderful week-long meeting in the Lake District, based at the Heaves Hotel near Kendal, with field and garden visits and incorporating the AGM. All these events were very well attended and supported by a wide selection of members. Several Society publications were also published. To celebrate our 125th anniversary in 2016 we returned to the Lake District for another excellent and well supported meeting, this time organised by Alec Greening.

Paul Ripley collaborated with Rémy Prelli to organise a meeting in Brittany, France in 1990, the Society's first overseas venture since 1965. Northern Spain was visited two years later, and then in 1993 Michel Boudrie, Rémy Prelli and André Labatut set up a meeting for the BPS in the Massif Central in France. Immediately afterwards was a short excursion in the Cévennes under the auspices of the International Association of Pteridologists (IAP) of which Clive Jermy was the driving force. During this the foundations were laid for the formation of the Group of European Pteridologists (GEP), coordinated by Ronnie Viane of Gent, Belgium. Several British members supported their annual field meetings through much of Europe from 1995 to 2015, and in 1997 the GEP joined the BPS for a week in North Wales, organised by Nigel Brown and based in Bangor.

Around the turn of the century the Society arranged or helped arrange two further symposia. The first, in 1995, was 'Pteridology in perspective' and our most recent international Symposium was 'Fern flora worldwide – threats and responses' in Guildford in 2001. The topical title, suggested by John Woodhams, ensured worldwide support. Both were rather technical for gardeners but they provided a forum for discussion of many issues by the leading pteridologists in the world.

In 2000 the Society became truly international when Jennifer Ide organised our first meeting outside Europe – an amazing fortnight in New Zealand. This set in motion an impressive series of trips beyond Britain and Ireland: 2002 – Tenerife, Canary Islands, and Chile; 2003 – Seattle, USA; 2004 – Trinidad; 2005 – NE Spain and NE USA; 2006 – Germany and La Réunion; 2007 – Maritime Alps, France, and Texas, USA; 2008 – Madeira (previously visited in 1995) and Costa Rica; 2009 – Eastern Australia and California, USA; 2010 – SE France and China; 2011 – Madeira and SE USA; 2012 – South Africa and Germany/Austria; 2014 – La Palma, Canary Islands, Northern Italy and Japan; 2015 – Vercors, France; 2017 – São Miguel, Azores; 2018 – Netherlands and Belgium; 2019 – North Germany. These meetings were organised by countless different individuals but I must mention a few: Jennifer Ide, Sylvia Martinelli, Sue Olsen, Naud Burnett, Yvonne Golding and Dan Yansura, but by far the greatest input consistently over this period, and before, was from Patrick Acock. Quite a few of these trips were organised jointly with the Hardy Fern Foundation in Seattle. The sudden availability of cheap flights made all this possible. They were wonderful times. Will they ever return? Maybe, but until Covid is under control flights are a big problem.

photo: Martin Rickard

'Feast in the East', USA, 2005

John Mickel and Alan Ogden. Alan about to ask a suspicious John to sign his copy of one of John's books!

This year, 2021, we have already held some very successful meetings – Zoom meetings. These are surely an important part of our future meetings programme, at least until Covid is under control. In 2020 we conducted Committee meetings and the AGM on Zoom, but the lecture possibilities are limitless. To mention some obvious possibilities – specific genera, gardens, overseas exploration, UK exploration, research developments, AGMs. Speakers worldwide are a possibility and there is potential for an international audience.

Since 1891, or 1871 depending on how you look at it, the Society has arranged many hundreds of meetings, perhaps approaching one thousand. There are few prime wild fern sites in the UK not visited but newer members are always interested to see good sites. Even today new taxa are being discovered within Britain and Ireland, to the particular excitement of older members. The horticultural arm of the Society happily never runs out of sites to visit as new gardens emerge and older gardens continue to develop.

photo: Martin Rickard

'Feast in the East', USA, 2005

Graham Ackers, Patrick Acock, Christian & Margit Kohout, Sue Olsen, Alan Ogden and Peter Tindley enjoying a group dinner (one of several tables)

Today we have a Meetings Subcommittee chaired by Bryan Smith. If you have any suggestions for future meetings please contact Bryan. Suggestions for meetings for local groups should be sent to group organisers. Contact details for all organisers plus full details of group meetings are given on the Society website.

Details of the Society's many and varied meetings and other activities are recorded in the *British Fern Gazette*, *Fern Gazette*, *BPS Newsletter* and the *BPS Bulletin*, and make fascinating reading. Back issues are available from Pat Acock, and they are also available online (other than for the last two years) via the BPS website and/or the Biodiversity Heritage Library. Gleanings about past meetings (and much more!) may also be found in BPS Special Publication No. 4 *The history of British pteridology 1891-1991.*

Many thanks to Alison Paul for adding to and generally enhancing this account.

BPS Meetings Secretaries

1962-1965	Peter Halligey
1965-1967	Dick Cartwright and Peter Temple
1967-1968	Dick Cartwright, and Norman Robinson (Northern; co-opted)
1968-1970	Dick Cartwright
1970-1982	Tony Worland
1982-1986	Kathy Kavanagh
1986-1987	Marion Fyfe
1987-1988	Matt Busby (acting Meetings Secretary)
1988-1996	Anthony Pigott
1996-1997	Patrick Acock (acting Meetings Secretary)
1997-2008	Patrick Acock
2008-2011	Rob Cooke
2011 to date	Bryan Smith

NATIONAL REPORT

DARTMOOR, DEVON – 25-27 September Laurence Sutton & Pat Acock

The choice of this particular weekend for an informal visit to fern sites around Dartmoor proved admirably auspicious given that we were blessed with blue skies and tolerably mild temperatures, whilst the east side of the UK was being blasted with heavy gales. Martin Rickard, Roger Norman, Grace and Pat Acock and Laurence Sutton met on the Friday evening at the Cromwell Arms, Bovey Tracey, on the eastern edge of Dartmoor. Strict adherence to social distancing was enforced by the friendly landlord! In his youth Martin had done much exploring in the region and he was keen to see how the sites for interesting ferns had changed.

Earlier in the day Laurence had travelled down to Tavistock on the west (wetter) side of Dartmoor to visit two sites. This was his opportunity to find *Cystopteris diaphana*, the diaphanous bladder fern. The graceful fern was duly located at a well-known site within an old railway cutting in Tavistock (SX4751 7432 area), at the base of a steep, acid rock-face, and in some areas showed luxurious growth. The typical leaf venation, with veins ending in emarginated notches, was relatively easy to appreciate, affording a method of separation from *C. fragilis*. This species was first discovered in the UK in Cornwall in 2000 (see Murphy & Rumsey, 2005, *Watsonia* 25: 255-263).

photo: Laurence Sutton

***Cystopteris diaphana* growing from damp rock-face, Tavistock**

Later in the day a visit to Shaugh Prior, south-east of Tavistock, via challenging narrow lanes resulted in finding good specimens of *Asplenium billotii*, lanceolate spleenwort, growing in earthy south-facing hedge banks (SX538632). The banks had recently been trimmed but good young fronds were evident growing from the loose rocky earth, together with some older fronds bearing mature sori. The fronds showed the typical features of the species, "bipinnate, with ultimate oval to orbicular segments distinctly stalked and minutely serrated on their outer margins into broad obtuse teeth, each terminating into a sharply pointed (mucronate) colourless tip" (C.N. Page, *The ferns of Britain and Ireland*, 2nd edition, page 65). Laurence then travelled over Dartmoor (first time ever) to Bovey Tracey.

Grace and Pat had arrived the previous evening and on Friday morning they first travelled north-eastwards from Bovey Tracey to visit Canonteign Falls (SX8395 8259), which encompass England's highest man-made waterfall. It was advertised as a fern garden so seemed a fine place to start, but over-enthusiastic Pat and Grace arrived an hour before opening. The fern garden was well arranged under the falls, which although created by diverting a stream were quite spectacular and gave the necessary degree of humidity for the ferns. They advertised 200 plus types of ferns in the garden but Pat only recorded about 35; perhaps the choice ones had been usurped by the natives. Amongst those noted were *Adiantum venustum* and *A. aleuticum*, *Parablechnum cordatum* (*Blechnum chilense*), *Osmunda regalis*, *Dryopteris erythrosora* and *Athyrium niponicum* 'Pictum'. A few lady fern cultivars such as 'Lady in Red', as well as other *A. niponicum* cultivars and *Athyrium* × 'Ghost' were present. There were a few *Dicksonia antarctica* with sizable trunks and there

was a young one that would soon develop a trunk. The most stunning fern was a species of Blechnaceae, probably *Lomariocycas tabularis* (*Blechnum tabulare*), which seemed to favour its chosen site.

photo: Pat Acock

Blechnaceae species, probably *Lomariocycas tabularis*, in fern garden near the falls at Canonteign

In the afternoon Pat and Grace visited Becky Falls (north-west of Bovey Tracey, parking at SX7585 7998), a quite long gentle section of falls where they just knew they would find a few new ferns. At the far extent of the Purple (long) Trail, Pat climbed up from the trail along the waterfall on a flat area, and found a solitary specimen of *Dryopteris aemula.* The next day the three others in the party were unable to find it.

On Saturday we all visited a track off Beadon Lane, south of Beadon Bridge (SX8177 8189). We followed the track through Netton Cleave Wood above the south side of Beadon Brook and climbed from the woodland track to examine the rocks on the steep hillside, looking especially for *Hymenophyllum tunbrigense*. We looked at the polypodiums, which were one context of the meeting, but sadly did not find the *Hymenophyllum*, first found by Martin in 1985. A second target was *Asplenium septentrionale.* Martin had previously found it on the north side of the valley on a steep scree in 1986 and 1989, in a site recorded by Keble Martin in *Flora of Devon*, 1939. Unfortunately this was not accessible from our current location and moreover the generally dense vegetation deterred any intensive search.

We moved north-west to Blackingstone Rock, via the lower end of Kennick Reservoir (SX807838). Previously many *Osmunda regalis* had been recorded in shallow water around the reservoirs in this area (*BPS Bulletin*. 1978. pp. 237-238) but we did not find any on this occasion. At Blackingstone Rock we were rewarded with several clumps of *Asplenium billotii* (SX7865 8558), previously seen by the BPS in 1978. Mixed in with it was a possible

photo: Martin Rickard

***Asplenium billotii** (right)* **on Blackingstone Rock with *A. adiantum-nigrum** (left)*

A. trichomanes subsp. *trichomanes*, both fern taxa being calcifuges, and *A. adiantum-nigrum* was also present. Martin later found an additional healthy colony of *A. billotii* nearby under a rock in the bracken.

We had lunch below the rock and three of us went on to the Becky Falls Walk. Martin located the *Hymenophyllum tunbrigense* but we were unable to trace *H. wilsonii*, both of which had been recorded by the BPS in 1978. Grace and Pat, having visited the day before, decided to go to Castle Drogo. Unfortunately they hit a hidden rock, not far from the parking area at Blackingstone Rock after the rest of the group had left, and split open a tyre wall. The locals proved to be extremely helpful and resourceful and managed to obtain a new tyre, but the Acocks did not arrive back at the hotel until late. However, we ended the day with a good meal and well-deserved drink back at the Cromwell Arms.

photo: Martin Rickard

Magnificent stand of *Polypodium cambricum* on Chudleigh Rocks

On Sunday, all five set off in search of *Polypodium cambricum* cultivars. The first stop was at Chudleigh Rocks, a large limesone outcrop with an impressive colony of *P. cambricum.* We parked at SX8665 7881 and set off along the path, which forked and three of us went across the top while two dawdled downhill. Eventually we all met at the top where Martin had retraced his *P. cambricum* Semilacerum Group and a good candidate

photo: Pat Acock

The party on top of Chudleigh Rocks

Martin Rickard, Laurence Sutton, Grace Acock, Roger Norman

photo: Pat Acock

***Polypodium cambricum* on Chudleigh Rocks**

for *P.* ×*shivasiae*. Martin felt that the number of polypodies around the main colony (SX865787) had reduced since his last visit in 2008, possibly due to encroaching undergrowth on less rocky substrate.

Moving on to Buckfastleigh, we parked at (SX7448 6682) and examined the dry-stone walls leading to the church (SX7440 6659). The tops of the walls and embankments were so covered in polypodies that it became impossible to discern what some of them were. There was plenty of *Polypodium cambricum*, including some weak 'Semilacerum' some of which had undulating fronds. Adjacent *P. interjectum* and probable *P. vulgare* were noted and almost certainly *P.* ×*shivasiae* and possibly *P.* ×*font-queri*. We had lunch here.

photo: Pat Acock

Roger Norman, Laurence Sutton and Martin Rickard examine polypodiums galore in Buckfastleigh!

In the afternoon we travelled northwards to the Webburn Valley, and experienced a significant challenge in parking three cars in the limited laybys (SX7196 7196). We walked up the left-hand side of the valley. Grace turned back as the path was rough and had only just been strimmed, covering the rocky terrain with bramble clippings. Martin raced on ahead with Roger. Martin's recall of the location of *Hymenophyllum tunbrigense* was spot on and when Laurence and Pat had climbed down to the river's edge and scrambled along for a while, they were rewarded with two large rocks mostly covered with this filmy fern. They also found they had missed two clumps of *Osmunda regalis.* We walked back to the cars on the other side of the river, which was much easier going, examining clumps of *O. regalis* on the way.

photo: Martin Rickard

***Hymenophyllum tunbrigense* hanging on in a reduced colony in the Webburn Valley where the habitat is perhaps drying out**

Heading homewards we searched for a cream tea, sadly to no avail and the party went its separate ways. Martin decided to visit Ipplepen, Dewbury and Torbryan on his route home, and found plentiful *Polypodium cambricum* on old walls in each parish, the best find being a passable 'Semilacerum' in Torbryan.

photo: Martin Rickard

***Polypodium cambricum* Semilacerum Group in Torbryan village**

We discovered that eastern Dartmoor has a limited number of ferns, but does have a few interesting ones in certain niches. We would like to thank Martin for a delightful weekend. Although not replete with ferns we had escaped the clutches of Covid-19 for a few days and were suitably enthused. Had the planned full Society meeting been possible, with a few additional more energetic members on the ground, we might have found more of the 'lost' treasures.

REGIONAL REPORTS

CORNWALL AND DEVON

Ian Bennallick

Although no field meetings were organised in 2020, some of us took the opportunity of the national lockdown and limited travel to explore local areas in more detail, and further afield when the regulations were relaxed. With the deadline date of inclusion of records for the new Flora of Cornwall the last day of 2019, restrictions for travel in 2020 made for a quieter and less urgent year of recording.

A Flora of Cornwall was published in early 2020 so it was too late to include a new record of a native fern for Cornwall. On 17th August 2020, whilst holidaying in north Cornwall, George Tordoff thought he had found a plant of *Cryptogramma crispa* growing in a north-east-facing horizontal crevice in granite rock under an overhang on Showery Tor, the small tor just east of Rough Tor, on Bodmin Moor, east Cornwall at SX1481. Not realising the significance of his find for the Cornish Flora at the time, having seen it growing in northern Britain on several occasions, he later thought that it may be something of note. When he returned home, he showed a photo of the fern to his neighbour, the well-known botanist Tim Rich, who agreed with George's identification. George also sent me a photo and I thought it looked very much like the sterile fronds on the *C. crispa* plants in my photos from a BPS walk at the Whiteworks site near Princetown in Devon in September 2018. I forwarded the photo to Fred Rumsey, who also confirmed it as *Cryptogramma crispa*.

photo: Ian Bennallick

***Cryptogramma crispa*, Showery Tor, Bodmin Moor**

The day after receiving George's photo, I visited the site with David and Anita Pearman, Tina Nightingale and Sue Partington, unfortunately in pouring rain! The walk to the top of the tor was thus very wet but it was easy to find the site and on searching around the tor there appeared to be just the one *C. crispa* plant in a natural setting, though the moorland turf around the tor is heavily grazed by ponies, cattle and sheep (a *Huperzia selago* plant growing above the *Cryptogramma* was very nibbled). We wondered if anyone would have planted it there and then thought why would anyone bother! It is at 383 metres in an exposed site, so the species has probably always been present but overlooked, or is a recent colonist. It is a very popular site with walkers so could spores have come in on uncleaned walking boots from trudges they may have made in places where *Cryptogramma* is common? Seeing the plant at a distance one might think it was a small *Dryopteris* or *Asplenium* and not worth a second glance, and as *C. crispa* has not been confirmed for Cornwall before, it is a species we just wouldn't expect or have our botanical 'senses' tuned to look out for. However, our elation at adding a new native fern for Cornwall did not last long.

photo: Ian Bennallick

***Cryptogramma crispa* site, Showery Tor, Bodmin Moor**

Sue Partington, Tina Nightingale, David Pearman, Anita Pearman

Phil Pullen, a recorder based in Plymouth, visited the site on August 31st and despite photos, grid reference and directions he reported that he couldn't find it. I was worried that the plant had either been taken by a person or eaten by grazing animals, but hoped that Phil had just not found it. However, when I revisited the site on October 10th there was no trace of the plant so it must have gone between our visit on 27th August and Phil's four days later. After discussion with other fern experts the likely explanation for the disappearance is that a bullock may have pulled the plant out whilst grazing. The plant was not deeply rooted in the crevice and one curl of a tongue could have easily pulled it out. I sometimes see dead *Huperzia selago* plants on the ground in the area around Rough Tor that have been pulled out by grazing animals.

We planned to search the tors in the Rough Tor area more thoroughly for *Cryptogramma* later in October, but travel restrictions were re-introduced so we are hoping that further searches will be made in summer 2021.

EAST ANGLIA

General report

Peter Blake

The East Anglia Group had a programme of meetings scheduled for 2020, which included visits to the Herbarium at the Natural History Museum, Gill and Bryan Smith's garden at Oulton Broad, the medieval double-ditches at North Walsham (previously written up in the *Pteridologist* 6(6): 425), Paul Spracklin's remarkable exotic garden at East Benfleet and an indoor meeting in Norwich at the home of Peter Blake and Nick Lodge. Sadly, in lockdown, none of these took place...

My own fern activities were largely garden-based, and I undertook an audit of what was growing where, with the intention of contributing to Julian Reed's fern hardiness review on the BPS website. As so often happens, I found many labels to have disappeared or to have been bleached and unreadable. However, sorting back through previous lists confirmed much of what had survived and what had died, either in the very wet 2019/20 autumn and

winter or the very dry 2020 spring. None of the tender ferns on Julian's list had died and I was surprised to find *Deparia petersenii* coming up next to some wooden sleepers. Later in the summer I found some sporelings as volunteers in nearby pots. Similarly, *Microlepia substrigosa* made a late but beautiful appearance under a *Magnolia grandiflora*, which provided winter protection but which dried out the ground in the spring and summer. Potted specimens of *Rumohra adiantiformis*, *Woodwardia prolifera* and *Sphaeropteris* (*Cyathea*) *cooperi* were surprising outside survivors of the, admittedly mild, winter. Several polystichums had a poor year, producing fewer, smaller fronds than previously. This was probably due to the very dry spring and the single late frost in early May, which particularly damaged *Polystichum polyblepharum*. However, I had used hosepipe watering when the rainwater ran out, and the water in Norwich is particularly hard so may have adversely affected them. This was very noticeable in *Polystichum vestitum* and *P. neolobatum*, which had previously been very robust. Other than that, I spent time culturing new ferns from spores obtained from the BPS Spore Exchange and preparing show specimens in the hope that the RHS Wisley shows will resume in 2021.

photo: Peter Blake

***Microlepia substrigosa* growing outdoors in Norwich**
This plant had previously survived 'The Beast from the East' in February 2018

Colin Adlam was active at the Danesbury Fernery and sent me the following report of progress this summer.

Danesbury Fernery, Welwyn, Hertfordshire – update

Colin Adlam

Since the East Anglia Group visited the fernery in July 2019 (*BPS Bulletin* 8(6): 504) we have all been remarkably busy. The 2019 summer remained hot and dry at times, requiring regular watering by loyal local volunteers, as has 2020's much more difficult summer. In the autumn, we fully dug out the tanked beds that Anthony Parsons, Head Gardener at Danesbury House, created in the 1860s to help his various *Osmunda* thrive. Backfilling with soil, composted leaf litter and bark, combined with regular watering may one day allow us to boast "*Osmunda regalis* with fronds at least 8 ft. in length, *Osmunda spectabilis* 4 ½ ft., *Osmunda claytoniana* 5 ft., *Osmunda cinnamomea* 3 ft., and the beautiful *Osmunda regalis,* var. *cristata*, 3 ft. in length." as Parsons did. Meantime, this area is planted up with *O. regalis, O. regalis* 'Purpurascens' and a variety of other ferns that should prefer the damper conditions.

This year has seen more structural work. An impressive steel and wood bridge now spans the gorge, the cistern above the dropping well has a sturdy grill for viewing, and recovered original rabbit-proof fencing now lines the path above the cistern (for safety). The two south beds, previously just grass, have been cleared and planting of ferns has begun along with some flowering plants. The fernery continues to get many ad-hoc visitors who much admire the flower gardens, as well as the ferns of course.

photo: Colin Adlam

Danesbury Fernery

Tanked bed showing structure and ground preparation

The Friends of Danesbury would like to thank members who have kindly donated ferns of great interest, and some in bulk, that will allow us to bring these beds to life. Colin Small gave me several well-established ferns that have already been planted in the new south and tanked beds. Ashley Basil supplied many ferns as plugs, which I am bringing on at home ready to plant in drifts this spring. Peter Blake kindly let me have ferns of interesting varieties, which I am over-wintering, and in the spring, I shall decide which I can spare for Danesbury.

photo: Colin Adlam

Danesbury Fernery

New bridge over gorge, with the new south beds (middle left) and the caged cistern (dark chamber just to left of bridge)

My personal perambulations have discovered a large concentration of ferns near my home by the River Ver, Frogmore, Hertfordshire. This area comprises silted-up watercress beds, later traversed by mechanised access to gravel workings, but remains almost untouched. It contains large areas of male ferns and aspleniums, and maybe other varieties that I have yet to discover and identify. The downside is that it is infested with mosquitoes!

MANCHESTER AND NORTH MIDLANDS

Mike Canaway

The Manchester and North Midlands Fern Group had meetings planned for 2020, but with the spring lockdown and talk of older people having to self-isolate, the summer meetings were cancelled although we had hopes of meetings in September going ahead. However, with the 'Hotel California' restrictions in the North-west and the increasing emphasis on social distancing and avoiding unnecessary social contacts, these were eventually postponed as well, including one due to be held at the new RHS 'Wisley of the North' Bridgewater site. I would ask members to support the new RHS site by visiting when restrictions permit. This is a large and costly venture by the RHS and will need to be well supported when the pandemic wanes. See www.rhs.org.uk/gardens/bridgewater.

Despite the pandemic, a little recording was done on a solo basis or by a few individuals where the 'six people outside' rule applied. Of note is the increasing incidence of *Osmunda regalis* on the Saddleworth Moors area of the Peak District in vice-county 63, South-west Yorkshire. This area is notable for the recent fires and the infamous 'moors murders' carried out by Ian Brady and Myra Hindley in the 1960s. Some of the land is owned by United Utilities but managed by the RSPB who seem to have reduced sheep numbers or removed them completely from some areas. *Osmunda* plants have been seen both in the leat (channel) near Greenfield Reservoir (SE0296 0546) and high on the peaty moorlands at over 500 metres altitude near Chew Reservoir, which was the highest reservoir in England until Cow Green Reservoir was constructed in Teesdale. The plants tend to be small and infertile, which begs the question as to where they are coming from. One group of plants is close to another rarity – *Rhododendron groenlandicum* (Labrador tea) whose origin is even more mysterious. In the Derbyshire part of the region (v.c. 57) there are only three monads where *Osmunda* has been recorded recently, one of which is at Snake Pass, also over 500 metres. In the *Flora of Derbyshire* it is referred to as "a very rare native perennial of mires and moors". Hence this species should be on our hit list for further study.

photo: Mike Canaway

Young plants of *Osmunda regalis* growing in the leat at Greenfield Reservoir

Another 'turn up for the books' was the discovery of a plant of *Dryopteris aemula* by the BSBI Vice-county 63 Recorders who asked me to go up and confirm it. *D. aemula* is normally a lowland oceanic species, so to come across it at 440 metres in the central Pennines is most unusual. It seems to be the only record for this species in the Peak District National Park and the park authorities were duly informed, as were the land managers, to avoid inadvertent disturbance. Another one for monitoring, I think.

Still within the National Park, and staying in vice-county 63, I did a foray up the now abandoned former Pennine Way route up Black Hill (582 metres). This was partly with my botanical recorder's hat on to see if I could locate *Carex bigelowii* (stiff sedge) as it seemed suitable habitat and it is present on the tops further north, but also to look out particularly for clubmosses, which are very scarce in this area, as well as any ferns. A detour into a disused quarry near the start led me to a fine, well-grown plant of *Huperzia* as well as a bonus *Oreopteris limbosperma* and *Struthiopteris spicant* (SE0544 0628). However, the journey to Black Hill brought to mind the name of T.S. Elliot's famous poem 'The waste land' due to the endless tracts of peat that originally gave Black Hill its name. I saw no-one until I reached the summit area and the present route of the Pennine Way reinforced with stone slabs. My search for the sedge was fruitless – too far south and not high enough – however, I unexpectedly came across a plant of *Dryopteris borreri* up there, with *D. dilatata* nearby (SE0782 0477).

photo: Mike Canaway

Typical crisped pinna of *Dryopteris aemula*, Marsden Moor, Dark Peak, September 2020

photo: Mike Canaway

Well grown plant of *Huperzia selago* growing in disused quarry en route to Black Hill, Dark Peak, August 2020

In contrast to the heights, pteridologists also like a disused railway line, especially if water is nearby. In the Tame Valley the disused railway is accompanied by the Huddersfield Narrow Canal and the River Tame itself from time to time. In woodlands here in late autumn I came across a *Dryopteris* about 1.75 metres tall, which I think is *D.* ×*complexa* until proved otherwise and also nearby an interesting *D. affinis*, which from a photograph Roger

Golding thought might be a form of *D. borreri*. More to look at during the growing season. There are several *D. affinis* subsp. *affinis* in the same woodlands (in v.c. 58) as well as plenty of the common fern species.

photo: Mike Canaway

A large plant at 1.75 m tall, probably *Dryopteris* ×*complexa*, Tame Valley woodland near Mossley, late November 2020

Looking ahead to the 2021 field season, the situation is still uncertain. Despite optimism over the vaccination programme, it will be a massive logistical exercise to vaccinate the required number of people to see population immunity – if this is actually achieved with new strains emerging. And then there is the uncertainty as to whether vaccinated people can still transmit the virus. Hence until the situation becomes clearer it is difficult to put together a meetings programme that can be guaranteed to take place. However, we have the cancelled meetings that can be rescheduled and have new initiatives from the Fern Monitoring Group to consider. For example, the small population of *Dryopteris submontana* (or should we be calling it *D. mindshelkensis*) in Derbyshire that I reported on in last year's *Bulletin*. Also, I understand that *Asplenium trichomanes* subsp. *pachyrachis* might be worthy of study and I recall Martin Rickard reporting in the *Pteridologist* on an occurrence of the plant in Cheshire that should perhaps also be revisited by this group. As usual, *Polypodium interjectum* is under-recorded, so those with a microscope can keep adding to those records as well. Thus there is plenty for the group to be getting on with and hopefully we will have more to report on next year.

NORTH WALES

David G. Hill

The North Wales Group has had, by comparison to other groups, a very short history, first setting out in 2016 (see *Bulletin* 8(3)). Looking back through some of the previous reports, excursions to Cwm Clyd, sunny days on Anglesey and the rainforest of Ceunant Cynfal stand out. Winter talks in village halls and pub retreats after field visits currently feel like events from a parallel universe.

On a personal level, 2020 started well, setting myself the goal of learning Spanish as a New Year resolution. I was looking forward to attending the autumn European fern course, scheduled to take place at the Universidad Complutense Madrid; unfortunately the year quickly went downhill and plans awry. A full lockdown in Wales resulted in all non-essential travel being banned, with exercise starting and ending at home – it certainly felt as if I was stranded in a fern desert, forced to look out of the study window (now working from home), looking longingly at the mountains, and promising myself trips to Anglesey, Carneddau and Celtic rainforests as soon as conditions permitted. The *Lycopodiella inundata* carefully taken into cultivation and coaxed through the winter foundered – whether the little lycophyte or the associated mycorrhizal obligates failed we don't know. Unable to revisit the scraps hanging on in the wild I can only cross my fingers and hope they have run rampant, enjoying a splendid isolation.

As months wore on, my need to see ferns was becoming more pronounced, I knew things were bad when I became excited about finding an urban *Pteridium aquilinum*, and started mapping squares in Rhyl that didn't have *Equisetum arvense*. Then a brief relaxation of restrictions in the summer enabled four hasty excursions, although the initial concern was finding quiet access to Snowdonia as the world and his dog descended in the fine weather.

First was a trip to Helyg near Ogwen Cottage (SH691601; v.c. 49) to check on the *Lycopodiella.* My worst fears were confirmed, and the large population first shown to me by Chris and Hazel Metherell had become extinct. A small colony measuring 21 by five centimetres and containing three strobili was found 100 metres away. North of the A5 the other population, originally found by Nigel Brown, was struggling to keep apace of the increasing sward density after drainage works, the indicator *Rhyncospora alba* already having given up. The original plans to slow water movement using slate slabs were unfortunately shelved due to the pandemic.

A few days later and still keen to stretch my legs, I headed out on a slightly over-optimistic climb up Cwm Cneifio to Llyn y Cwn (SH6358; v.c. 49) on the Glyders from the Llanberis side. The aim was to search the last known location of *Spinulum* (*Lycopodium*) *annotinum*, yet many more visits are needed to cover this huge area. A good fifty fern records were added to these under-recorded monads, including 16 species of ferns and lycophytes. Highlights were *Dryopteris oreades*, *D. expansa*, some miniaturised *Phegopteris connectilis*, and, new to me, the very pretty bryophyte *Anthelia julacea* (alpine silverwort). Unsurprisingly,

photo: David G. Hill

A small but perfectly formed *Phegopteris connectilis*

Spinulum annotinum wasn't found, and my legs took more than a while to recover after a hair-raising jelly legged descent through Cwm Padrig.

photo: David G. Hill

***Dryopteris cambrensis* in Marchlyn Quarry**

Whilst looking for quiet starting points for field excursions, an opportunity presented itself to collect some *Dryopteris* fronds for Alison Evans. The Marchlyn Quarry (SH602626; v.c. 49), just above Deiniolen near Bangor was abandoned in 1969. The site is lovely, with good amounts of *Diphasiastrum alpinum* and *Lycopodium clavatum* despite its low altitude. The upland fern flora consisted of the usual suspects (*Polypodium vulgare, Equisetum fluviatile, E. palustre, Asplenium adiantum-nigrum, A. trichomanes, Cryptogramma crispa* and *Athyrium filix-femina*). The *Dryopteris* species turned out to be *D. affinis s.s.*, a possible morphotype 'convexa' and *D. cambrensis*. Again this is another site to go back to but a hard hat and wellies are advised.

North-east of Denbigh, the North Wales Wildlife Trust site of Y Ddol Uchaf (SJ142713; v.c. 51) has the distinction of being the only tufa outcrop large enough to be mapped on UK geological maps. Previously quarried, this tiny triangular reserve did not have a vast assemblage of ferns (*Asplenium scolopendrium*, *Dryopteris filix-mas*, *D. dilatata*, *D. borreri*, *Polystichum aculeatum* and *P. setiferum*), but a lovely road bank showed a fine selection of mixed species. This small site would benefit from a more thorough search, as well as a detailed look for hybrids, a check of the equisetums and an unusual (mountain?) male fern when a return visit is allowed.

photo: David G. Hill

***Asplenium scolopendrium* vista, Y Ddol Uchaf**

photo: David G. Hill

Lacewing larva on *Asplenium scolopendrium* sori, Y Ddol Uchaf

As a second lockdown started I began looking for new projects. I started looking at the fern records of the Carneddau, to identify gaps and places to go recording, and secondly a broad look at all the fern records for North Wales, hopefully to help with identifying priorities for the Society's new Fern Monitoring Group.

The local record centre (Cofnod) has just over four million records covering the five vice-counties of North Wales (Flintshire, Denbighshire, Caernarvonshire, Anglesey and Merionethshire). Although this sounds considerable, only 25,000 species-level records are held for pteridophytes. Broken down, 83% of these are for ferns, 14% horsetails and the remaining 3% lycophytes. Notably the quillworts are missing from my initial analysis and I have yet to delve properly into the records, but other interesting gaps are starting to emerge, for example there are only two records for *Equisetum hyemale*, yet it has escaped from my garden and can be seen running through the neighbouring gardens!

To ease frustrations I ran an 'Introduction to ferns' course online and was pleasantly surprised by the attendance and enthusiasm of others trapped in front of screens. I found other events online, on all aspects of natural history, from eels and desmids, to plate tectonics and whisky, and these have certainly proved a sanity saver. I hope others have managed similar finds. A couple of events really stood out. A talk by Silvia Pressel of the Natural History Museum on 'Key land plant innovations' for the Linnean Society was one. This included bryophytes, hornworts and subsequent mycorrhizal associations with early land plants including the lycophytes. Several doctoral defences on arctic vegetation and the BSBI Scottish conference also proved fascinating watching. I also found a few, mostly international, fern courses. Jolanda Nel gave a wonderful talk on the 'Ferns of South Africa' for the very friendly San Francisco Fern Society. This included a few species familiar to UK pteridologists but led me into the new domain of Old World ferns. Weston Testo (a postdoctoral researcher at the Antonelli Lab at the University of Gothenburg, Sweden) gave a fascinating five-part course on the 'Ferns and lycophytes of Central America', and Alejandra Vasco, Botanical Researcher at the Botanical Research Institute of Texas gave a wonderful talk on 'The wild world of ferns' and introduced an enthralled audience to some of the 127 fern and lycophyte species of Texas. That New Year resolution to learn Spanish was not entirely wasted!

However, despite leaning more about Old and New World lycophytes and ferns, I fear I have forgotten everything I thought I knew about the UK *Dryopteris* complex. Oh well, perhaps that should be this year's lockdown goal?

Over the next few months I am looking forward to delivering reciprocal online sessions to the San Francisco Fern Society, Eagle Hill Institute and, more locally, Cofnod. However, despite all the computer-based activities, I am still itching for the current lockdown restrictions to be eased and an opportunity to get out and reacquaint myself with both fern fronds and fern friends…

NORTH-WEST

Laurence Sutton

Who would not agree that the year 2020 had stifled our freedoms. An oppressive buffer against the urge to get out into the wilds during the period of Covid-19 induced lockdown! All formal meetings, including the group's AGM and the national BPS meeting in Eskdale, were cancelled. It was perhaps not surprising that once the lockdown restrictions imposed on travel and gatherings were eased in the summer months it did not take much prompting to arrange informal visits to fern-rich areas of Cumbria for those wishing to venture out. Social distancing rules were abided by and face masks used when required.

Thus Alison Evans, Trevor Lowis, Roger Golding and Laurence Sutton set out on three separate day visits to follow up previous records not only of the unusual epiphytic and rupestral species likely to be found in the Lake District but to explore in more detail the complexities and interrelations of the scaly male ferns. (In the latter respect I was soon out of my depth!) The trips did allow time to reconnoitre for future visits.

The three inspirational days of ferning reported below were all possible due to the knowledge and patience of Alison, Roger and Trevor. Thank you.

Stanley Ghyll and Milkingstead Wood, Eskdale, Cumbria – 11 July

In the morning we met near Beckfoot in the small car park at Stanley Ghyll (NY1712 0027). The weather was sunny with fair weather clouds, making the whole day a pleasant experience.

We followed the main path towards Stanley Force (waterfall) before taking the path running along the Stanley Ghyll Beck. Notable amongst the profusion of ferns, particularly to the right bank of the path, were numerous *Dryopteris oreades*, some handsome *D. affinis* subsp. *paleaceolobata*, several specimens of *D. affinis* 'convexa' at SD1740 9993, a few *D. dilatata* and of course several robust ferns that caused debate on their possible ploidy and parentage. At SD1739 9996 we found a plant that we thought could be *D.* ×*complexa* nothosubsp. *contorta*, the hybrid between *D. affinis* subsp. *paleaceolobata* and *D. filix-mas*. Stomata measurements did confirm it as a likely tetraploid. Trevor noted a *D. lacunosa* nearby and there was also *D. cambrensis*. At the top of a bank was an unusual rather toothy plant, which could be an odd form of either *D. borreri* or *D. cambrensis*; this was later confirmed as triploid and had up to 50% abortive spores – a bit of a mystery.

photo: Laurence Sutton

***Dryopteris lacunosa*, Stanley Ghyll, Eskdale**

Further up towards the falls *Hymenophyllum wilsonii* was located on a rocky surface adjacent to the path and there was a further 'convexa' on the first bridge crossing the Ghyll. Unfortunately, access to the falls over the higher bridges was restricted because of the danger of rock-fall. This was a pity as my recollection of my previous visit in 2017 to the area nearer the falls was of a profusion of *H. wilsonii* covering the rocks on

photo: Laurence Sutton

'A bridge too far' – Restricted access to Stanley Falls, Eskdale

the far cliff and on the rocks adjacent to the footpath. I took a souvenir photo of the fall from the first bridge to mark the occasion.

We had lunch back at the car park and then drove to Forge Bridge over the River Esk, parking just beyond the bridge (SD1488 9950). From here we gained access to the footpath that follows the south side of the river and then enters a field (SD1506 9957), following the contour of the lower level of Milkingstead Wood. We gained access to the wood from the field and made our ascent to the crags that form the upper level of this magical wood. Our goal was to find *Dryopteris aemula*.

En route we found abundant colonies of *Hymenophyllum tunbrigense* on the rocky outcrops that are a feature of these woods but could not find any *H. wilsonii*. After some deft scrambling onto the lower to mid-aspect crags we found several quite robust *D. aemula*. In the general area there was also *D. expansa*. The fragile nature of the soil and vegetation on the rocks and fissures was noted and we had to tread carefully on the friable ground, avoiding damaging the plants we had come to see and record. We found in the region of 50 plants of *D. aemula* in the area SD1542 9961.

Other fern species noted on the way into the woods were D. *dilatata*, *D. affinis*, *D. affinis* subsp. *paleaceolobata*, *D. borreri*, *Phegopteris connectilis*, *Struthiopteris spicant* and *Oreopteris limbosperma*. We had had an enlightening day and felt we had achieved a reasonable reconnoitre to inform a Society visit: virus listen up!

photo: Laurence Sutton

Milkingstead Wood, Eskdale

Trevor Lowis, Alison Evans and Roger Golding admire *Dryopteris aemula* (with *Oreopteris limbosperma* in the centre)

Castle Crag, and Bowder Stone and Crag, Borrowdale, Cumbria – 28 July

We had originally planned to visit Borrowdale on Monday 27th but with a forecast of torrential rain we deferred our visit to the day after, which proved very agreeable with some light showers, sunshine, and the occasional rainbow over splendid vistas!

photo: Laurence Sutton

View over Rosthwaite, Borrowdale

We met in the small car park in Rosthwaite (NY2576 1486) and made our way west and north-west towards Castle Crag, crossing the River Derwent over New Bridge (NY2519 1510) and then turning to head up the slope towards the screes (NY2491 1582) on the south side of the Crag. Instead of continuing up towards the top of Castle Crag we ventured to the west and kept moving northwards between the base of the Crags and the screes between NY2489 1586 and NY2483 1608. We proved to be commendable mountain goats!

Our aim was to locate the previously recorded *Asplenium septentrionale* and look for *A. trichomanes* subsp. *trichomanes*. Both ferns thrive on acidic (lime-free) nutritionally poor rocks, however, we did observe a small *Cystopteris fragilis* (a base-loving species) on a slight detour over the scree (NY24904 15876).

Our initial spleenwort encounter was with *Asplenium adiantum-nigrum*, then several plants of *A. trichomanes* that looked morphologically like subsp. *trichomanes*. Some showed quite luxuriant growth and we speculated on the prospect of them being the hybrid *A.* ×*lusaticum*, recorded here by Ken Trewren many years ago. Also of note were several good stands of probable *Polypodium vulgare*, *Dryopteris oreades* and *Oreopteris limbosperma*, and at least one probable *Dryopteris cambrensis*. A rock crevice revealed a nice group of *Asplenium adiantum-nigrum*, *Struthiopteris spicant* and sterile fronds of *Cryptogramma crispa*.

photo: Laurence Sutton

***Asplenium trichomanes* subsp. *trichomanes* on Castle Crag, Borrowdale**

Approximately halfway along the base of the crags we found our first *Asplenium septentrionale*, growing from a crack in the rock, and a further two prominent plants, one growing out of a crevice and a higher plant on a more open ledge. More plants were found further along the route. Growing out of a low cleft in the rock-face at NY248160 was a neat, narrow-fronded, very scaly *Dryopteris* with convex

pinnules. Stomata checks indicated diploidy and thus a likely *D. affinis* 'convexa'. Even further towards the end of the crags a concentration of *A. septentrionale* was found. Trevor and Roger counted 13 plants between them. For my part I was pleased to see *A. septentrionale* and *A. adiantum-nigrum* growing together from the same rock niche, which I had observed on a previous visit to the site in August 2017 with James Merryweather. They seemed to have changed little since then. However, I did note that no plants were present higher up, where I recall some plants had suffered from erosion.

We walked back to Rosthwaite for lunch, enjoying the fabulous views as we traversed the slopes to the south of Castle Crag. En route we came across the pretty bog pimpernel, *Anagallis tenella*, pointed out by Trevor, plus white beak-sedge, *Rhynchospora alba.*

photo: Roger Golding

***Asplenium septentrionale* on Castle Crag, Borrowdale**

In the afternoon we set off for the Bowder Stone car park (NY253168) on the east side of Borrowdale to look at the multiplicity of scaly male ferns on the wooded slopes to the east of the car park. Not far from the parking area were two large *D. cambrensis.* We made our way towards the crags up a steep, virtually overgrown path network. It would be an understatement to say that the fern growth of these wooded rocks and crags was luxuriant. This was a wonderful Atlantic oak wood environment that was a privilege to be in! We noted bracken (*Pteridium aquilinum*), broad buckler fern (*Dryopteris dilatata*), lemon-scented fern (*Oreopteris limbosperma*) and lady fern (*Athyrium filix-femina*) on the hillside, around our target ferns of *Dryopteris affinis* 'convexa', previously sampled for flow cytometry. Three of these had been confirmed as diploid, but a fourth was found to be triploid. On re-examining this specimen at NY2542 1682, we decided that it was probably *D. cambrensis.* There was a large specimen of typical *D. cambrensis* nearby, and some plants of *D. affinis* subsp. *paleaceolobata*. In the same area there was a rock covered in *Hymenophyllum wilsonii* (NY2542 1681), and nearby *Phegopteris connectilis*, *Gymnocarpium dryopteris* and *Struthiopteris spicant*. Higher on the hill we also found *D. affinis* subsp. *affinis*, and a large colony of robust plants of *D. oreades*. The latter dominated the scree and after a steep scramble Roger pointed out the

photo: Laurence Sutton

***Hymenophyllum wilsonii* on a prominent rock near the Bowder Stone car park, Borrowdale**

crested form he had found the previous year, growing with some *D. affinis* group plants (probably mostly *D. cambrensis*) and *Cryptogramma crispa* (NY2549 1669).

We completed our exploration of the area late afternoon at the end of a very satisfying day out.

Penny Rock Wood and Nab Scar, Rydal, Cumbria – 16 August

Four of us met (socially distanced) near Rydal Water at White Moss car park (NY3484 0654) and guided by Roger Golding set off into Penny Rock Wood. On a dry-stone wall adjacent to an old drain tunnel (NY34813 06507) Roger showed us *Asplenium* ×*lusaticum* (the triploid hybrid between *A. trichomanes* subsp. *quadrivalens*, a tetraploid, and subsp. *trichomanes*, a diploid). The parent plants were higher up on the wall, the *A. trichomanes* subsp. *trichomanes* being the more evident.

Penny Rock Wood provided an array of interesting ferns and identification quandaries. Many were adjacent to the path running along the wall on the north side of the wood. A good specimen of *Asplenium ceterach* was noted on the wall at NY3426 0614 next to a quite florid looking *Dryopteris oreades*, which had a hint of a black spot (NY3426 0615). Nearby there was a good example of the lichen *Peltigera canina* on the base of the wall, and a probable foliose *Dryopteris borreri.* A short distance further along the path at NY34360 06114 there was a grand example of *D.* ×*complexa* (tetraploid) which stood next to a large specimen of *D. affinis* subsp. *affinis*.

Further on at NY34374 06117 was a large plant with the overall appearance of *D. cambrensis*, but as the fronds were neater looking than usual for this taxon, a sample was taken to check the ploidy level by flow cytometry. This was done by Dr Libor Ekrt in the Czech Republic, confirming that it was in fact diploid. Average stomatal length was 40.9 microns, which is lower than usual for *D. affinis* subsp. *affinis*; the identity of this plant remains a mystery. A more typical *D. cambrensis* was located close by at NY34377 06116, and a further example of *D.* ×*complexa* (confirmed as tetraploid by flow cytometry) was located at NY34376 06117.

Progressing eastwards, a few *D. carthusiana* were noted in a damper area to the right of the path. At NY34441 06127 was the first of the *D. affinis* subsp. *kerryensis* for this trip, found on a visit by Roger the previous month while hunting for an old record of *D.* ×*mantoniae*. This area is the second UK location for subsp. *kerryensis*, having been found in Ennerdale in 2017.

Before leaving Penny Rock Wood we found a large *D. cambrensis* (or possibly *D.* ×*complexa*) next to a fine *D. affinis* subsp. *paleaceolobata* at NY34459 06130. On leaving the main path to exit the wood we noted *Oreopteris limbosperma* and many robust polypodies on an oak tree, probably *Polypodium interjectum* from morphology.

The shorter second part of the morning walk took us back across the road towards the car park and then along a side road up the hill to examine several interesting ferns, again formerly noted by Roger. At NY34612 06369 was a strange plant with intermediate characteristics, which we speculated could be *Dryopteris* ×*protocambrensis*. This is the hybrid of *D. oreades* with *D. affinis* and would have the same genome complement as *D. cambrensis* (a triploid). Stomata measurements showed this plant was triploid, and the dark spot at the base of the pinnules was poorly developed, but more investigation is necessary. Further along at NY34527 06350 a row of four ferns was noted of which one had a possible hybrid look, perhaps *D.* ×*mantoniae*, and one had a *D. cambrensis* look about it. Trevor measured the spore size of one of these possible hybrids: 39.72 µm so it is likely to be *D. oreades.*

We made a very brief foray into Baneriggs Wood and encountered an exceptionally large *Struthiopteris spicant* at NY34527 06350. A large '*borreri* type' plant at NY34396 06288 was thought to be a possible *Dryopteris lacunosa*.

After lunch we ascended the path (NY3494 0656) to the east of the car park towards Nab Scar. Near the waterfall at the beginning of the walk was a good example of *D.* ×*complexa* (NY34951 06633) and higher up on the right, adjacent to the wall, was *D. affinis* subsp.

kerryensis at NY35005 06677. Higher still we encountered a probable *D. cambrensis* at NY35025 06684, although the pinnules were not angled in the way of a typical plant, an example of which was noted just up the path at NY35052 06733. We recorded *Asplenium adiantum-nigrum* and *Polypodium vulgare* at NY35083 06780.

Another highlight of the day was the '*Asplenium* display' at NY35137 06756 on a dry-stone wall. *Asplenium trichomanes* subsp. *trichomanes* and subsp. *quadrivalens* were present along with probable *A.* ×*lusaticum* (although this needs more work to confirm). A fine *Dryopteris affinis* subsp. *paleaceolobata* was noted at NY35285 06665.

The final push of the day was a scramble up through a 'Goldingesque' terrain of loose shale, brambles, bracken, potholes and friable ground cover, commencing at NY35375 06664, with a scattering of mainly oak trees. Our goal was a collection of at least six *D. affinis* subsp. *kerryensis* plants at NY35432 06697. A single plant was noted on the way up at NY35385 06685. In this area *D. dilatata* was present, and lower down from the main group of *D. affinis* subsp. *kerryensis*, there was *D. carthusiana* growing in dryish block scree and looking very untypical (stomata measurements suggested this was tetraploid and therefore probably not *D. expansa* as was initially thought – this is another one that needs more investigation). We were puzzled by three large ferns at NY35421 06712 above the main area of *D. affinis* subsp. *kerryensis* as although they appeared to be large plants of *D. oreades*, they had the distinct dark spots of scaly male ferns, more like *D. cambrensis* or perhaps hybrids. These triploid-looking plants were later measured as diploid by Trevor.

photo: Laurence Sutton

Path to Nab Scar, Rydal

Dryopteris affinis subsp. *kerryensis* and *D. dilatata* with *Athyrium filix-femina* and *Phegopteris connectilis*

photo: Trevor Lowis

Alison Evans absorbed in a rupestral fern!

On the way back we noted *Cryptogramma crispa* on a high wall, and a good colony of *Phegopteris connectilis* at the bottom of the track where we had commenced our walk! Trevor checked a further intermediate looking plant on the way back down at NY3485 0662 as a possible candidate for *D.* ×*mantoniae* but the stomata size and spore size were in keeping with *D. oreades.*

An inspiring day, with for me some further insight (and ignorance revealed) into the male fern group. Alas, no definite candidates for *Dryopteris* ×*mantoniae* were found.

SCOTLAND

Holyrood Park, Edinburgh – 1 June

Bridget Laue

(*Participants:* Mary Gibby, Bridget Laue, Paul Sharp.)

Covid-19 lockdown meant the cancellation of our scheduled spring meetings. Even at the start of June, lockdown rules permitted people from only two households to meet outdoors. Mary suggested we meet near Holyrood Palace to venture into Hunter's Bog in search of the adder's tongue fern, *Ophioglossum vulgatum.* The last 'official' visit here by the Scotland Group had been in 2014, although I suspect that Mary monitors this population every year. Spring in Edinburgh had been especially dry, and so we had some concerns about how these plants were surviving.

photo: Paul Sharp

***Ophioglossum vulgatum* in Hunter's Bog, Edinburgh**

From a distance, the likelihood of finding these small ferns in among the long grass seemed remote, but knowing roughly where to search, we quickly located the first plant, and then discovered many more in the surrounding area (NT273734). Three people kneeling (socially distanced), staring at and photographing the ground, caught the attention of a passing family. Mary explained to them (a mother with two young children) the significance of this little plant which, while not a rarity, is nevertheless quite rarely seen and recognised. Their interest was piqued, so maybe one was a botanist in the making.

photo: Mary Gibby

***Asplenium* ×*murbeckii* on Arthur's Seat, Edinburgh**

We had not intended to look for other pteridophytes, but walking a little further south, towards the (greatly diminished) wetter parts of the bog, we found three species of horsetail (*Equisetum arvense*, *E. fluviatile* and *E. palustre*). After a brief picnic, we turned around and headed home, happy to have been out ferning on a fine sunny day, and content that the adder's tongue population near the centre of Edinburgh is still thriving.

Mary Gibby adds: Some other ferns deserving regular monitoring in Holyrood Park are those that flourish in the south-facing basalt rocks of Arthur's Seat and this year they took a lot of punishment from the dry weather and glorious sunshine we had in May. But by mid-July it was encouraging to see new growth emerging from the shrivelled brown fronds of *Asplenium septentrionale*, *A. ruta-muraria* and, of course, their hybrid *A.* ×*murbeckii*!

photo: Mary Gibby

***Asplenium septentrionale* on Arthur's Seat, Edinburgh**

Balquhidder, West Perthshire – 25 July

Andy MacGregor

(*Participants:* Natalie Cozzolino & Andy MacGregor (leaders), Clive Dixon, Tim Godfrey, Michael Hutchinson, Mari MacGregor, Paul Sharp.)

The weather forecast was awful, and the likelihood of finding interesting ferns uncertain, but, lured by some old botanical records and geological maps showing localised outcrops of limestone, we planned a hike up Kirkton Glen, above the Perthshire village of Balquhidder.

photo: Paul Sharp

Equisetum variegatum **above Kirkton Glen**

As fortune would have it, the sun shone and the ferns were fabulous. From the old church (NN535209) – final resting place of my notorious relative Rob Roy MacGregor – we walked up through the conifer plantation for a couple of miles, finding many of the commoner ferns and horsetails on the way, including male ferns *Dryopteris affinis*, *D. filix-mas* and *D. borreri*, lady fern *Athyrium filix-femina*, bracken *Pteridium aquilinum*, hard fern *Struthiopteris spicant*, lemon-scented fern *Oreopteris limbosperma*, field horsetail *Equisetum arvense*, wood horsetail *E. sylvaticum*, marsh horsetail *E. palustre* and water horsetail *E. fluviatile*. Stag's-horn clubmoss *Lycopodium clavatum* was frequently found sprawling over the road verges.

At last, emerging into open country, we were struck (metaphorically) by a giant block of stone the size of a small house occupying the middle of the pass – Rob Roy's Putting Stone as it is known (he must have been a big lad). Before we reached the stone we distracted ourselves with some botanically rich flushes where we found the spikemoss *Selaginella selaginoides* and a good amount of variegated horsetail *Equisetum variegatum*, much of it tinged a pleasing orange colour. On reaching the Putting Stone (NN516243), we noted a few interesting ferns among the limestone boulders scattered immediately to the north, including beech fern *Phegopteris connectilis* and some fine specimens of mountain buckler fern *Dryopteris expansa*. Stomachs were rumbling though, so we hastened to the nearby Lochan an Eireannaich ('small loch of the Irishman') for lunch. Sitting by the water's edge, we were able to admire the herb-rich vegetation and spotted some of the rather horsetail-like alga, delicate stonewort *Chara virgata*, growing in the water.

photo: Michael Hutchinson

On Leum an Eireannaich

Paul Sharp, Andy MacGregor, Tim Godfrey

Duly sated, but still hungry for pteridophytes, we started clambering over the limestone crags and boulders to the east of the lochan. These were impressively rich in plants, angiosperms and pteridophytes alike, and comparable

photo: Michael Hutchinson

On Leum an Eireannaich

Andy MacGregor, Clive Dixon, Mari MacGregor, Natalie Cozzolino

in splendour to many of the more well-known arctic-alpine plant hotspots a little further north on the calcareous mica schists of the Breadalbane Hills, including Ben Lawers. Highlights included several fine specimens of holly fern *Polystichum lonchitis*, some more mountain buckler fern, and frequent mountain male fern *Dryopteris oreades*. Among the less strictly montane ferns were oak fern *Gymnocarpium dryopteris*, common polypody *Polypodium vulgare*, and a good spread of spleenworts, *Asplenium* species, including green spleenwort *A. viride*, wall-rue *A. ruta-muraria*, maidenhair spleenwort *A. trichomanes* subsp. *quadrivalens* and hart's-tongue fern *A. scolopendrium*. More clubmosses were in evidence, including fir clubmoss *Huperzia selago* and alpine clubmoss *Diphasiastrum alpinum.*

photo: Paul Sharp

***Polystichum lonchitis*, Leum an Eireannaich**

Having had our fill of ferns, and with the rain threatening at our backs, we descended to Balquhidder, paid a quick visit to Rob Roy's grave, and then went our separate ways.

photo: Andy MacGregor

Rob Roy's Grave, Balquhidder

Andy MacGregor, Mari MacGregor, Natalie Cozzolino,
Michael Hutchinson, Paul Sharp, Tim Godfrey

The Black Mount, Argyllshire – 22 August

Bridget Laue

(*Participants:* Clive Dixon, Liza Downie, Tim Godfrey, Roger Golding, Bridget Laue, Myles O'Reilly, Paul Sharp.)

The 2005 fern atlas has marsh clubmoss (*Lycopodiella inundata*) occurring in only 64 hectads across all of Great Britain and Ireland; a third of these are in Scotland. In the recently published *Britain's ferns*, James Merryweather describes marsh clubmoss as "Uncommon, very small, often submerged, therefore, not easy to find." Just the sort of challenge the Scotland Group likes! Our last meeting monitoring marsh clubmoss was back in May 2012, led by Heather McHaffie at a site (Inverarnan) just north of Loch Lomond (see *Bulletin* 7(5): 424). In 2020, Clive Dixon proposed that we follow up on some old records of a *Lycopodiella* population on the shores of Lochan na h-Achlaise. Apart from a single record from 2008, all others dated to the period 1998-2000, and most had been made by Phil Lusby and Gordon Rothero.

We assembled at a lay-by on the east side of the A82, just south of the bridge over the channel connecting Lochan na h-Achlaise to Loch Ba (NN316485). To the east lay the vast expanse of Rannoch Moor. We donned our wellingtons, crossed the road and went westwards along the north shore of the Lochan. The plants we sought were certainly inconspicuous but, led by Clive, we were soon spotting them: one or two plants here, three or four there. Eventually, we had found *Lycopodiella* at 12 different sites, including one previously unrecorded on an islet towards the western end of the lochan, which Clive reached by walking on water (actually, using rather precarious stepping stones).

photo: Paul Sharp

***Lycopodiella inundata* on the north shore of Lochan na h-Achlaise**

photo: Paul Sharp

Socially distanced ferning

Bridget Laue, Liza Downie, Clive Dixon, Tim Godfrey,
Myles O'Reilly, Roger Golding

Along the way we found two more lycophytes: *Huperzia selago* and *Selaginella selaginoides*, and one species of horsetail (*Equisetum fluviatile*). True ferns were few and far between; we saw *Oreopteris limbosperma*, *Blechnum spicant*, *Dryopteris dilatata* and *Athyrium filix-femina*. When a bank of *Pteridium aquilinum* came into view it was, for once, welcome simply to add to our species tally, which ended at nine. Retreating back across the moor, we reached our cars and went for (socially distanced) tea and cake in the Green Welly at Tyndrum.

SOUTH-EAST

A History of the South-East Group

Pat Acock & Paul Ripley

Beginnings

In December 1983, Paul and Linda Ripley and Pat and Grace Acock had a surprise invitation to afternoon tea with Clive and Alma Jermy. We went down to their beautiful home in Otford, Kent, which was conveniently situated midway between both our homes. We were lucky that way. Clive floated the idea of starting a new regional group. Being a little naïve, we endorsed the plan.

PR joined the Society in 1974, and PA in 1969, which must make him one of the most long-standing members. Believe it or not, it was a few years before PR plucked up courage to attend a meeting; he even turned up at a couple of venues, but was too scared, and scared of perceived ignorance, to join the group. PA was greatly encouraged by the redoubtable Frank Brightman, a larger-than-life character who ran the South London Botanical Institute and was the

photo: BPS Archive

Clive Jermy expounding on a sedge with Frank Brightman on the left – Kent, *c.* 1982

Education Officer at the Natural History Museum. PA had previously met Frank when he was running a course at the Orpington Adult Education Centre.

The threads were initially and firmly joined when we both attended a weekend residential course run by Clive at a Field Study Centre in Rogate. The chemistry was aided by PR's arrival during a thunderstorm in pitch blackness to find the rest of the group in a candlelit local pub. Having finally summoned the courage to join the group, PR found, indeed we both did, the friendship and encouragement of others to be truly inspirational. The sadly late Ray Smith was one in particular who took PR under his wing.

It was partly the desire to bridge the gap between the enthusiast and the expert in a less formal, dare we say less intimidating, setting, that informed our approach to the Group. It also provided meetings lasting no more than a day in London and the south-east that were within easy driving distance for the large number of the region's busy members with commitments.

The following year (1984), under Clive's direction, we held our first two meetings – at Nap Wood and Rocks Wood, south of Tunbridge Wells, and at Great Dixter. Nap Wood (Sussex Wildlife Trust) is a beautiful site for *Dryopteris aemula*, while Rocks Wood on the Eridge Estate contains a wonderful site both for *D. aemula* and for *Hymenophyllum tunbrigense*, close to its original type locality at Eridge Rocks. Great Dixter was the home of garden writer Christopher Lloyd. An incredibly original and influential gardener, but poor as a church mouse, he entertained us personally on a number of occasions. We have returned to these amazing places a few times since.

People

Some of those first meetings attracted a few people who have been loyal right up to the present day and we would like to pay tribute to a few of them, with thanks for all their encouragement and help over the years: Steve and later Karen Munyard, Peter and Gill Clare, Jennifer Ide, Rosemary Hibbs, Graham Hoare, Howard Matthews, Margaret Harris, Ron King and Andrew Leonard.

photo: Paul Ripley

Lunch on the Green at Brabourne Lees, Kent – August 2015

Lindsey Holleworth, Roger Golding, Pat Acock and Karen and Steve Munyard with *Asplenium scolopendrium* fronds from Folkestone Warren, one of which equalled the SE Group's record of 3 foot 3⅞ inches!

Steve Munyard built up an incredible knowledge of fern sites and their history, and not just in his childhood haunts around Tunbridge Wells. He has led a variety of meetings for us, and the support of his wife Karen, not to mention her amazing hospitality and wonderful cooking, has been greatly appreciated.

Peter and Gill Clare have hosted meetings in the Tunbridge Wells area – Peter is a true countryman and shrewd observer of everything rural. His ability to find prehistoric flint tools, his knowledge of the stars, his respect for quality, not just in garden tools, and his expertise as a horticulturalist, always amazes us. We are delighted to have passed our mantle onto such capable shoulders as those of Peter himself, and Julian Reed, a relative newcomer!

Jennifer Ide hosted several meetings, and entertained us at her home near Eltham. She cared devotedly for her mother, lectured at the Roehampton Institute, and still found time to be a County Commissioner for the Girl Guides.

Rosemary Hibbs kindly entertained us after meetings to refreshments at her home in Hailsham. She produced some lovely artworks for the Society, and her interesting family had recreated an entire working signal box in their back garden – the 'Cuckoo Line' from Groombridge to Eastbourne once ran alongside.

Margaret Harris, whose father Tom Harris was the leading palaeobotanist of his generation (both he and Professor Holttum studied under Professor A.C. Seward), similarly refreshed us at her home in Epsom.

Graham Hoare is a loyal supporter of the Society, and audited the Society's accounts for some years.

Ron King hosted us at his home in New Ash Green. We don't think he drove, and PR used to give him lifts to meetings. He was the most modest self-effacing man, but the best grower of ferns we have come across. He reminds us of the sadly late Mick Craddock. Both were inveterate smokers and we wondered whether the nicotine, or perhaps its pesticide properties, was part of their success.

photo: Paul Ripley

***Polystichum* ×*bicknellii* at Row Dow Nature Reserve, Kemsing – October 2013**

Igor Kovanovic, Geoffrey Kitchener, Tim Pyner, Jude Lawton

Howard Matthews lives in North Harrow, serviced Hotpoint washing machines – a job he hated and where he was utterly under-appreciated – and is much involved with his local natural history society. He knows so many fern habitats in his area and has led some very interesting meetings in localities we would not normally have thought of visiting.

Andrew Leonard became closely associated with our group from 1988. He is an extraordinarily able man who has led many meetings for us, always extremely thoroughly researched, and which have often taken us to the western edges of our normal area. He has the confidence (or naïvety) to go up to strangers and effect an introduction to gardens or interesting habitats that we would never otherwise have seen.

Jo and Ashley Basil hosted meetings in the New Forest, and then formed a Wessex Group, with which we have had held joint meetings.

Geoffrey Kitchener, the BSBI recorder for Kent, has joined (and hosted) a number of our meetings, and arranged joint meetings with his local botanical recording group.

Mark Border has welcomed us at meetings in his various gardens near Hastings. His knowledge of palaeobotany has expanded our horizons. He now produces the delightful and informative newsletter for the Cultivar Special Interest Group.

John Edgington, a retired Professor of Physics at Imperial College, knows all the ferns in the centre of London, where he lives.

Graham Ackers soon joined us on meetings, leading many around his local area, first on the slopes of Leith Hill, and latterly further south in Walliswood. On many occasions we enjoyed the hospitality provided by Graham and his partner (later wife) Lesley Williams. Graham was the most organised person we have known. He was a connoisseur of beer, a Blues aficionado, co-author of a definitive book on British marine sponges, and collector of fine botanical books. Lesley died tragically young, and Graham seven months later. He left his collection of books to the BPS, and they were auctioned to the benefit of the Society.

photo: Pat Acock

Ashdown Forest – September 2008

Trevor Lording, Julian Reed, Paul Ripley, Peter Clare, Tim Pyner, Howard Matthews

Other loyal supporters include Tim Brock, Michael Radley, Roger Golding, Jude Lawton, Peter Tindley, Fred Rumsey, and Trevor Lording, a chartered accountant and an amazing botanist – he knew every plant we encountered… We could go on, and apologies to the many great people we have omitted.

We have had some great characters over the years, like Frank Brightman, mentioned earlier. He came up to PA at the lunch-time break on a particularly cold and wet early meeting and said, "I thought that the idea of these meetings was to see some plants". Which we have much quoted over the years. Then there was Sir Henry Peto, Bt, who invited us to and entertained us at his home near Selborne, and asked for our advice on the creation of a fern garden. We didn't realise he was the local MEP.

Places

In about 1989, PR had a bee in his bonnet about a meeting in Brittany, and his idea came to fruition as a Society meeting in 1990 with Rémy Prelli as our guide. Imagine our surprise when he showed us *Vandenboschia* (*Trichomanes*) *speciosa* down a well in an unpretentious village in Brittany. He must have peered down every well in every French village! We hired a minibus and stayed at hotels, seemingly attempting to outdo each other with the quality of their cooking. Some of us had difficulty with the whole spider crab presented to us on the last night in Erquy. This was the first BPS meeting outside the UK or Ireland since the trip to Austria in 1965.

Following the Society's 1993 meeting in Central France, it was decided to have an excursion every year in Europe to bring the region's pteridologists together. Ronnie Viane from Gent was the main facilitator, and the gatherings were regularly supported by SE Group members. The Group of European Pteridologists (GEP) had no constitution, no committee, and existed solely for the purposes of organising a meeting each year. Perhaps it was modelled on the South-East Group; the absence of a subscription, committee, constitution or an AGM makes for informality and flexibility.

Being also involved with the National Programme, we kept just two meetings going for a few years to supplement this, but at the turn of the decade we introduced an autumn meeting where a short field morning was interrupted by lunch and a slide-show to highlight people's interests and visits during the past season.

Many of the SE members were by this time taking in the meetings of the East Anglia Group (and vice versa) and were also moving outside their region. When the late, great Tim Pyner took over the East Anglia Group we decided to have at least one joint meeting a year, and we made sure our dates did not clash.

The programme and events of the Group have been assiduously documented and collated by Alison Paul in our *Bulletin*. You may have listened to a BBC Radio 4 programme 'The unbelievable truth', in which panel members try to 'smuggle' elements of truth past their opponents in a fictitious account of a particular subject. Well we try to smuggle jokes past our esteemed Editor. We only managed it once – and we're not telling you when, Alison.

It is worth mentioning a few meeting highlights.

An innovation was a winter meeting in Ashdown Forest. Keeping interest going during the winter is a challenge for the Society, and this was our attempt to do so. Not entirely successful on a cold, wet January day in a cold, wet moorland bog, but we did find *Osmunda regalis*. The recent initiative of meeting by Zoom offers a possible way forward for the Society during the winter.

Ronnie Viane organised for us a day trip to his home near Gent in Belgium. We met (in time for fish and chips) at Dover and caught the ferry to Ostend. Ronnie had arranged for a

bus to meet us. It drove us to the edge of Brugge, and we walked through the historic and picturesque town to be met and taken to Ronnie's lab at the university, and then his garden for a viewing of his plants and, of course, tea.

Among the many meetings that Andrew Leonard has organised for us was one that finished with a visit to his allotment (which has since featured on Gardeners' World) – soon christened the 'Portsmouth Botanic Garden' – and a barbecue attended by some of his many interesting friends. The catering was multicultural, and some of us became converted to, among other things, toasted halloumi.

Jennifer Ide ran a couple of meetings at the Roehampton Institute in south-west London. We benefited greatly from the opportunity to use the microscopes and other facilities under her expert direction.

Another laboratory meeting was organised by Barry Thomas at Goldsmiths' College (now a department of the University of London) at New Cross. The opportunity to use (or at least to look down) the department's electron microscope was an unforgettable experience. Professor Holttum, who by this time was well over 80 and stone deaf, came all the way from Kew to join us. PA recalls the Professor's delight at seeing antherozoids swimming under the microscope.

John Edgington used his local knowledge to take us on a couple of guided tours of inner London, especially its basements. Who would have thought we would find *Asplenium septentrionale* at the base of pavement railings, or *Adiantum raddianum* in the courtyard of the Royal Academy.

Mark Border enlisted the help of friends in the Hastings Local History Society to show us fossils on the beach at Pett. Giant horsetail (*Temskya*) fossils abound (and dinosaur footprints are as common as the mud they formed in) but the sight, on a recently fallen chunk of cliff, of a perfect imprint of a more than 200 million-year-old quillwort, looking identical to modern *Isoetes*, was unforgettable.

The assistance of members slightly outside the strict definition of the South-East enabled us to venture further afield, for example into Dorset (Robin Walls), Hampshire (Andrew Leonard, and Jo and Ashley Basil in the New Forest), East Anglia – and Bedfordshire where Mick and Linda Craddock welcomed us to their home in Ampthill. Mick was a driving instructor who fulfilled his dream of becoming a London black cab driver by taking 'the knowledge' and passing this notoriously difficult test in record time. It was typical of his thoroughness and practical competence. His garden was truly amazing. A subtropical paradise in suburban Bedfordshire, crammed with ferns in every available inch of space, and all watered by the most ingenious water conservation system. A visit to Valdy Pierozynski's collection of tropical ferns near Ampthill provided an excuse to visit the Swiss Garden at New Warden. This had been fully restored before our second visit but unfortunately not yet planted; imagine our disappointment when the only fern was a single *Asplenium scolopendrium*.

Of course the majority of our meetings have lain within a smaller radius of London. There are no mountains in the south-east but we are fortunate in possessing forests (Kent and Sussex are the most heavily wooded counties in Britain), oceanic habitats in the Weald, which host English rarities such as *Dryopteris aemula* and *Hymenophyllum tunbrigense*, and many famous and beautiful gardens (Sissinghurst, Great Dixter and Scotney Castle to name only a few). A popular meeting combines a field excursion with a garden visit (providing the opportunity for tea of course).

photo: courtesy Paul Ripley

Speldhurst in the Weald of Kent – July 2016

Julian Reed, guest, Lindsey Holleworth, Pat Acock, guest, Paul Ripley, Peter Clare, Jude Lawton, Peter Tindley, Roger Golding

You can look up these events and many others in our *Bulletin*'s amazing index.

One of the pleasures of running meetings has been the opportunity to do some 'recces'. Free from the constraints of time and the organisation of people, we had licence to explore. We could be over-ambitious at times, and felt a certain guilt about the time spent away from our families. We were badly caught out on one occasion. One last site! Tempted by a particularly lush specimen of probably *Dryopteris dilatata*, one of us (PR) fell up to his waist into a bog. He doubts he could have got out without Pat's help. We like to think we have looked out for each other over the years. Anyway, this episode necessitated stripping off and washing in a nearby stream. Arriving home dripping wet and in underpants just as PR's wife Linda was showing prospective purchasers the house, did not go down well.

Endings and beginnings

You may have formed the impression that all we have done was take tea and enjoy lovely food and refreshment. But the enjoyment of the social aspects of our Society, the sheer pleasure of being in the company of sympathetic and like-minded colleagues, is part of the bond that unites us, and is something that remains when darkness falls, or when winter's frost turns ferns' greens to grey.

After 35 (?!) years, we decided that it was time for fresh blood and new ideas. We are so pleased to know that in Julian Reed and Peter Clare we have successors who will maintain not only the expansion of our knowledge of ferns in the south-east and the enjoyment of our beautiful countryside, but also the pursuit of the spirit of friendship and sheer enjoyment of our hobby.

SOUTH WALES AND THE BORDERS

The pleasure of ferns during lockdown

Sue Dockerill

What a strange year 2020 was. Like many other groups, we cancelled all our scheduled activities, which meant our usual reports for the *Bulletin* were similarly curtailed. So, what to do? Well, Martin Rickard came to the rescue and volunteered to write up a visit to Titterstone Clee Hill, and this prompted us to think that we might recount the ferning we had done between our home and allotment – a walk we became very familiar with during lockdown (results of both below).

Inspired by these two thoughts, we decided to contact the rest of the group to see what ferny activities they had managed during their enforced isolation.

photo: Nick Hards

***Polystichum setiferum* 'Bevis' in Nick Hards' garden**

Both Nick Hards and Angela Tandy had found pleasure in their gardens. In May, Nick had spotted an extraordinary frond on one of his *Polystichum setiferum* 'Bevis' progeny (see photo). He wanted to press it but unfortunately the house painters damaged it – it was directly below the bathroom window.

For light relief in between sending out unending parcels of plants, Angela had been gathering her favourite ferns to plant in a new fern bed at home. In February she sprayed the front lawn with Roundup; after a month it had turned the desired golden yellow. At the start of lockdown, she thought she would have some time off as she assumed no-one would be buying plants. She did have two days off and managed to cover what had been the front lawn with cardboard and a thick mulch of composted farmyard manure, thinking she could plant over the summer. Well, the weather put a stop to that but come September and lovely soaking rain she made a start and put on a thick layer of old potting compost that had been through the shredder. She is looking forward to having ferns in the ground instead of in pots!

photo: Sue Dockerill

***Equisetum sylvaticum* south of Twyn y Glog, Glamorgan, 26th April**

Others had taken to spreading fern knowledge. Martin Godfrey gave the second part of his course 'Introduction to ferns' for the Shropshire Botanical Society, and Bob Brown prepared a talk on fern identification for novices using the experiences (good and bad!) that he had had on BPS trips.

And of course, ferns in the wild featured too. Martin Godfrey tried to propagate bracken from spore for the first time and reports some success, at least to the prothallus stage. He had also been looking for his favourite fern hybrids and trying to get to grips with the *Dryopteris affinis* complex. In addition to our familiar walk to the allotment, we explored our nearby woods and hills and added a new record for *Equisetum sylvaticum* for Glamorgan on the south side of the very minor road from Llanwonno to Pontypridd, south of Twyn y Glog (ST0518 9282). A lovely colony, maybe four or five metres long and coning really well – not earth shattering but nice to find. And we also grappled with the *D. affinis* complex by collecting samples for Alison Evans as part of her project 'Morphology and ploidy level of the putative diploid taxa in the *Dryopteris affinis* (Lowe) Fraser-Jenk. complex in Britain'.

All in all it was a varied and busy year for the group – just rather socially distanced!

Ferns found on the walk from our home to our allotment

Brian Dockerill

Living in Rhondda Cynon Taff, a high virus area where at one point the infection level reached almost 600 in 100,000 people, we have been locked down more than most, but found it has had a brighter side. In fact we enjoyed exploring our local patch so much that even in the summer when we could travel further we chose to 'stay local' rather than going to our usual favoured areas for walking of the Brecon Beacons, Wye Valley or Forest of Dean.

Although the borough has, as a legacy of the mining industry, valley areas of high-density housing that probably played a big part in the spread of the virus, the great majority is well wooded upland farming, moorland and forestry. We grow our vegetables on an allotment at ST0648 9294, along a country lane three quarters of a mile away from our home at ST0721 9242, and on our walks there and back we have now recorded 14, possibly 15, fern taxa.

The obvious ones, common and easily spotted, were *Asplenium trichomanes* subsp. *quadrivalens*, *Athyrium filix-femina*, *Dryopteris filix-mas*, *D. dilatata* and *Pteridium aquilinum*. A better look at the *Dryopteris* soon showed there was both *D. borreri* and *D. affinis* in the wetter hedge banks and also a possible candidate for *D.* ×*complexa* – unfortunately a badly timed session of verge trimming made confirmation of that impossible! There are also quite a lot of polypodiums in the drier hedge banks and even on top of a dry-stone wall. Microscopic examination showed that all but one was *Polypodium vulgare* and the brave plant growing luxuriously on the top of the wall was *P. interjectum*. *Asplenium scolopendrium* is not common, but there are several colonies in the damper sections.

Our soil is generally acid, so lime-preferring taxa are not frequent except on walls. However, several years ago we found a single *Polystichum setiferum* on a garden boundary. Could it be an escape? A few years later we found another well away from the first and from any houses. So perhaps not. Now both plants have a host of offspring both around them and on the other side of the lane and there is an additional colony in yet another section. So however it was introduced, *P. setiferum* is doing well. When we found the first *P. setiferum*, we also spotted a single *P. aculeatum* not too far from it. Its history is much less happy. It has not enjoyed our recent hot summers and has shrunk each year, and currently only has one small frond. It is hanging on in there, but for how much longer?

Our walks further afield have shown us that, in addition to those listed above, several other ferns are common in our area. Diligent searching for these on our allotment walk has added *Asplenium adiantum-nigrum* and *A. ruta-muraria* to the tally, but so far not *Oreopteris limbosperma*, *Asplenium ceterach*, *Dryopteris cambrensis* or *Equisetum arvense*. But given the fluctuating nature of our finds, who knows – we continue to look in hope.

So, despite the limitations of 2020, and missing our friends in the BPS, the summer was certainly not all bad and learning to appreciate what we have close at hand was a real joy.

A day on Titterstone Clee Hill, Shropshire – 20 May

Martin Rickard

Late last spring, frustrated by the lockdown and lack of Society meetings, I asked Mark Jannink if he fancied some botanising on the Clee Hill. Fortunately, we both live nearby and our region was a very low risk Covid area. With social distancing we therefore set off on a perfect sunny day, me in my car, Mark on his motorcycle.

photo: Martin Rickard

Mark Jannink at site of *Botrychium lunaria*, Clee Hill

Note short vegetation, well drained.

Titterstone Clee hill is 533 metres high (1,749 feet). It lies north-east of Ludlow and just south of Brown Clee Hill, which is a little higher at 540 metres (1,772 feet). Access to Titterstone is easy, with a metalled road to about 450 metres, and only 500 metres away from the top. Albeit a steep 500 metres!

After rendezvousing with Mark, we set off to look for *Botrychium lunaria*, which is well known growing by the car park. It had been pointed out by Sue Norman to a BPS group I led up the hill on the 1st August 2004. Sue had seen it in two small areas some years before. That day we examined the location she had indicated and eventually found a few specimens going over for the season. They were on a bank at the base of a north-facing cliff. The other colony in a more open spot we did not re-find; presumably it had gone over.

This year Mark and I first examined the shady area (SO5933 7767) where Sue had shown it to us, but we found nothing. Disappointed, we moved over to the open sunny site (SO5936 7765) and eventually found about 20 plants just beginning to point through the grass. *Botrychium* is obviously affected by site warmth, and based on two different years this pegs the season at something like the 20th May (sunny site) to 1st August (shadier site) at 450 metres altitude in south Shropshire. Perhaps a useful seasonal date guide?

Well pleased with our success we made our way to the hill's summit, passing many hundred *Viola lutea* (mountain pansy) in full flower, a wonderful sight.

photo: Martin Rickard

***Botrychium lunaria*, Clee Hill**

photo: Martin Rickard

***Cryptogramma crispa*, summit of Clee Hill**

In 2004 I remember seeing at least four plants of *Cryptogramma crispa*. One very near the summit that we re-recorded this time (SO592781) was only just starting into summer's growth. Interestingly it grows on the shattered remains of the ancient fort wall as it winds along to the summit. The others were in the boulder scree below the summit where we did not have time, or energy, to hunt. Instead we wandered away due east from the summit. At about SO598782 we found one or two plants of *Huperzia selago* and some scruffy plants of *Dryopteris oreades*. Not very exciting but good to know they are still there. In 2004 we had found better examples of both in the scree below the summit; no doubt they are also still there.

From here we made our way southwards towards the radar station, satisfied with a very pleasant day, but Mark had some details of more *Cryptogramma* on the south-west end of a stony bank below the radar station (SO597778). This looked a pretty uninteresting, unpromising site but remarkably there was *Cryptogramma crispa*, two or three good plants, and alongside it *Phegopteris connectilis* with a very small *Dryopteris*, a possible candidate for *D. oreades*. Surprisingly no *Gymnocarpium dryopteris*.

Even more satisfied with the day, at this point we moved back towards the vehicles, encouraged by the possibility of finding more *Botrychium*. We didn't! So it was home for Martin, but Mark is always full of energy. He stayed on searching the steep ground south-west of the trig point where he found more *Cryptogramma crispa*, *Phegopteris connectilis* and *Gymnocarpium dryopteris*, thus during the day recording all of the uncommon ferns and lycopods known for the hill.

photo: Martin Rickard

***Phegopteris connectilis* near radar station on Clee Hill**

None of these ferns are national rarities but apart from *Botrychium* all the species mentioned are on the edge of their ranges. According to *The new atlas of the British & Irish flora* (2002), there are no current records south-east of Clee Hill for *Cryptogramma crispa*, *Dryopteris oreades*, *Huperzia selago*, five only for *Phegopteris connectilis* and only one for *Gymnocarpium dryopteris.* Titterstone Clee Hill is therefore a very special site and the only site in Shropshire for *Cryptogramma crispa*. In 2002 there were no extant records of it for western England south of Morecambe Bay, apart from one small site on Dartmoor and, very recently, a single site on Bodmin Moor in Cornwall.

WESSEX

Fern hunting in the New Forest, Hampshire – 20 May — Andrew Leonard

photo: Andrew Leonard

Botrychium lunaria
Appleslade Bottom, New Forest

Jo and Ashley Basil and I went back to check out the *Botrychium lunaria* north-east of Ringwood at Appleslade Bottom near Linwood (SU180093). We have been monitoring this site since 2015, and this year we found about 50 plants. They grow in an open field amongst bracken, a lot of which seemed to be suffering from a late frost. This helped us find the botrychiums but it is unlikely that we found them all. This is around the same number as for previous years but they seem to be 'moving' lower down the slight hill. Our counting methodology involves bamboo kebab spears, 12 inches long, with some red sticky tape added at the top to make them more visible. We put one of these next to each plant, and when we have had enough of searching we collect and count them. We also found about 12 distinct colonies of *Ophioglossum azoricum* in three different areas.

Following sightings by Alison Bolton and Mike Rowe, we went to see two new sites for *Dryopteris aemula* in the New Forest. The first was east of Linwood in Bratley Inclosure (SU227088), which, at first sight, seemed an unlikely place. However, within an area of some 200 by 200 yards, we found about 200 plants looking very healthy. The second site was Norley Inclosure (SZ352981), north-east of Lymington, where we found possibly ten rather miserable plants of *D. aemula.* This brings the number of sites known to us for *Dryopteris aemula* in the New Forest to six.

photo: Andrew Leonard

***Dryopteris aemula* in New Forest**

photo: Andrew Leonard

Ophioglossum azoricum
Appleslade Bottom, New Forest

On our way from one *D. aemula* site to the other, we stopped off to see the progress of *Asplenium ceterach* on the Sway Road bridge over the railway (SU2951 0070) between Brockenhurst and Sway stations. This bridge was renovated by Network Rail and in the process all the plants were removed and the pointing redone. We were pleased to see that despite the best efforts of the rail company, *A. ceterach* has seemed able to cope with this treatment and has even generated new sporelings.

YORKSHIRE FERN GROUP

Holly fern surveying, Northern Pennines – 1 & 19 January — Bruce Brown

Carmen Horner and I managed just two outings early in the year for holly ferns, *Polystichum lonchitis*. The first, on New Year's Day, was to Scordale (parking in Hilton NY735207), which is part of the Warcop Military Ranges so access is restricted to non-firing days. There was a 2005 record for a few small plants below Dow Scar (NY7622) that were subsequently reported to have been destroyed by a landslip, so we decided to check whether or not any had grown back in recent years. The valley of Scordale is steep-sided, with scars and screes, much of it limestone, and large areas of levels and spoil debris remaining from its once active lead mining industry. It does look to be a really good habitat for holly ferns. Nevertheless, despite an assiduous search all around the previous record's given location, nothing was found on the day. Eleven other pteridophyte species were seen: *Asplenium viride*, *A. scolopendrium*, *A. trichomanes* subsp. *quadrivalens*, *A. ruta-muraria*, *Cryptogramma crispa*, *Polystichum aculeatum*, *Polypodium vulgare*, *Dryopteris borreri*, *D. filix-mas*, *D. dilatata* and *D. submontana* (some dying fronds remaining). There is apparently another BSBI *P. lonchitis* record in this general area, which we haven't got round to checking.

A fortnight later, our second outing was to the plateau-like landscape of Knock Fell, not far from Cross Fell, the highest summit of the Pennines. Leaving home in the dark with the prospect of a good day to come, our first sight of Cross Fell as daylight dawned was a white line along the horizon. We hadn't bargained for snow to be present, but at our parking spot up Knock Ore Gill (NY714309) at 670 metres altitude we had already reached the snowline, and on attaining the plateau top a hundred metres higher up it was around seven centimetres deep, but soft. So we pressed on to the holly fern location at the bottom of a shake hole (NY7131). Here our hopes were dashed – the depression was half filled with older drifted snow from the ridge, now frozen solid and impenetrable. It being a lovely winter's day, we enjoyed the wide Pennine views and plodded on to a second site across a depression of peat hags, normally wet, but frozen and pleasant today. On the undulating white moorland beyond we searched for another area of shake holes, which, being much shallower and not near a ridge-line, were free of frozen ice (NY7330). A dark gash in the dazzling snow was revealed to be a small limestone fissure dropping down into the depths, where the clump of holly ferns resided, nicely protected from the worst weather and out of reach of grazing sheep. The fronds were green and healthy, up to 34 centimetres long, but too frozen for us to check how many crowns of separate plants were present. We retraced our steps, literally, back to the road.

photo: Bruce Brown

***Polystichum lonchitis* on Knock Fell, Pennines**

Vandenboschia monitoring, Bingley, West Yorkshire – 14 March **Bruce Brown**

We were fortunately able to carry out this *Vandenboschia speciosa* survey before the coronavirus restrictions came into force, and it turned out to be a very successful day. Jesse Tregale's plan was for YFG members to meet in the morning to monitor the plants, especially at the lower site in Holme House Wood, and then meet up with Bradford Botany Group members at lunch-time to show them the fern safely before moving on elsewhere.

Nine members, including Roger Golding who had travelled over from the north-west, met on a bright mild morning. In previous visits we had found eight sporophyte sites, increasing to around 11 last year in the lower woodland, clustered around spring runnels in and amongst mossy rocks and difficult to pinpoint exactly. So this time we used the blue marker flags from other monitoring projects to number and mark their positions and take location photos for future use. This has proved to be successful for closely clustered plants where GPS grid references are too variable over short distances of a few metres.

photo: Alison Evans

***Vandenboschia speciosa* at Bingley – Plant 18**

Once the plants in the main population had been flagged, we split into small groups, some counting and measuring the fronds, others taking photos, and also exploring further afield. Laurence Sutton, Steve Hindle and Roger were successful in discovering three extra colonies. Our 2020 total became 25, a significant increase from last year, due no doubt to more members searching thoroughly and also to new sporophytes growing (or becoming large enough to spot) over the prevailing mild winter conditions. Results for the two largest plants were:

No. 18 – March 2019: 19 fronds up to 21 cm long. March 2020: 30+ fronds up to 23.5 cm.
No. 19 – March 2019: 13 fronds up to 16 cm long. March 2020: 20+ fronds up to 17 cm.
No. 10 was typical of a new colony, with around 20 tiny unlobed sporophytes and four slightly branched up to 2.5 cm long, growing from a large bed of gametophyte. The plants were clearly flourishing.

As lunch-time approached, Jesse and Brian Byrne left to meet the Botany Group and carefully show them one of the outlying plants in the population to ensure there was no site damage. They were appreciative of being able to see and photograph such a splendid and rare fern growing more or less on their doorsteps. Some YFG members were interested to drive over to Ilkley to see the Heber's Ghyll *Vandenboschia*. The main plant was still in good condition with around five fronds, whereas the second, which suffers from being under the beck's water flow, was reduced to a single frond.

Meanwhile a few of us concluded the lower woodland monitoring and then checked out the upper woodland. This includes the classic Bellbank site and the two extra colonies found in 2018. No extra locations were discovered this time. The classic site remains in a very healthy state, with around 25 fronds up to 12 centimetres long. One site under a rock overhang showed some desiccated fronds, the only location of any concern. The presence of all-year-round flowing spring water at the classic site and the lower woodland populations does indeed appear to be a positive influence for the wellbeing of the plants. We also think that the Himalayan balsam that smothers the area over the summer months is helpful in maintaining humidity.

Jesse reported that the Botany Group had also explored along the riverside at Bingley (SE104395). A wall known for its *Polystichum aculeatum* plants was now sporting a young *Cyrtomium fortunei*, thought to be a new addition for the vice-county 63 records.

FERN MONITORING GROUP

Barry Wright

The Fern Monitoring Group was set up in 2020 with the primary aim of contributing to the national and global database on ferns as possible climate change markers, or at the very least, as markers for possibly detecting any declines that could perhaps be reversed. The national steering is being run by Dr Barry Wright and Laurence Sutton, with immeasurable help and support from many other members. It falls under the overall umbrella of the BPS Conservation Officer, Fred Rumsey.

During the year the Fern Monitoring Group was able to advance, with a number of initiatives being completed, or at an advanced state of progress. These include an introductory leaflet (Why? What? Where? When? How? Who?) to promote and describe the aims of the project in the hope that it will induce others to join and contribute.

We also created a spreadsheet into which we will record our monitoring activities, whether it is a particular species or a sensitive site, with a view to coordinating activities across the country and avoiding duplication. This spreadsheet will identify someone at the national level who will coordinate the overall activities. There will be a list of regional species or site coordinators, and they will be responsible for setting out timetables for when they wish to monitor certain species or colonies and publicising this either on the national website or as part of local group activities. The aim is to encourage more members to become actively involved, as only then will we be able to cover the large number of sites and species needed to achieve our objectives. We will be working to develop the FMG area of the website and to develop recording apps and tools to assist the project.

Behind all of this we have begun the process of developing monitoring protocols for groups and species that we wish to monitor. This is being done in coordination with those already involved in monitoring and also those that we wish to involve in monitoring. These will form the basis of a repeatable system that can be used into the future to ensure consistency of monitoring sufficient that even minor changes in the status of a species can be detected.

With all of this in mind, we will be reporting on the monitoring group activities annually as part of the *Bulletin* reports. We work closely with Fred Rumsey to ensure that we keep on track and that he is happy for us to publish what we have learned. One of the issues that we have is data confidentiality as in some cases we are monitoring very rare colonies of species. The locations of such need to be kept confidential and we need to 'dumb down' the locations so that populations do not become threatened by our very actions. We will also need to be assured that volunteers wishing to monitor do not have the ulterior motive of gaining access to rare ferns and their sites.

Monitoring in 2020

Despite Covid-19 restrictions, the monitoring of moonwort and pillwort in Yorkshire went ahead during the summer. It is sort of poignant that the original monitoring of moonwort was born out of complying with restrictions during the foot and mouth outbreak in 2001. The only limitation in 2020 was that this work was done, for moonwort by Barry Wright alone, and for pillwort by Barry Wright and Anne Carter using government distancing rules.

Moonwort (*Botrychium lunaria*) Monitoring, Yorkshire Dales

In 2020 the moonwort survey was done on 23rd May, continuing the monitoring of the permanent quadrats on the road between Redmire and Grinton (SE039965). Conditions were fine, and apart from being a lonely exercise, all went smoothly. The results show that, alarmingly, there are still very significant declines in overall numbers and of numbers in individual quadrats – see the table of results below. Only two moonwort plants were found in the entire survey collection of 12 quadrats. For adder's tongue (*Ophioglossum vulgatum*) only one frond was found in the two quadrats being studied.

Quadrat data for moonwort and adder's tongue from 2009 to 2020
showing changes in individual quadrats between years, and total variations[1]

		Quadrat no.[2]										Quadrat no.[3]		Total
		230	**231**	**232**	**233**	**236**	**322**	**323**	**324**	**325**	**326**	**267**	**269**	
Moonwort	2009	10	6	0	11	39	9	9	27	15	12	-	-	**138**
	2010	20	10	3	27	75	22	4	25	17	11	-	-	**214**
	2011	24	12	2	13	51	18	3	47	39	21	27	10	**267**
	2012	23	4	3	8	52	14	7	21	39	13	19	6	**209**
	2013	50	7	7	16	35	9	5	43	28	23	7	11	**241**
	2014	7	1	2	12	25	2	15	12	34	30	4	3	**147**
	2015	26	2	5	13	8	0	6	2	31	35	2	8	**138**
	2016	35	9	6	17	9	0	6	12	24	16	1	11	**146**
	2017	6	1	0	1	4	0	2	4	11	11	0	4	**44**
	2018	8	0	2	9	1	1	2	8	14	12	0	3	**60**
	2019	1	1	1	3	0	0	0	2	9	1	0	4	**22**
	2020	0	0	1	0	0	0	0	0	1	0	0	0	**2**
	Average	**18**	**4**	**3**	**11**	**25**	**6**	**5**	**17**	**22**	**15**	**6**	**6**	
	Minimum	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	
	Maximum	**50**	**12**	**7**	**27**	**75**	**22**	**15**	**47**	**39**	**35**	**27**	**11**	
Adder's tongue	2011											3	3	**6**
	2012											8	4	**12**
	2013											0	6	**6**
	2014											4	2	**6**
	2015											2	7	**9**
	2016											3	3	**6**
	2017											4	3	**7**
	2018											4	2	**6**
	2019											4	0	**4**
	2020											1	0	**1**
	Average											**3**	**3**	
	Minimum											**0**	**0**	
	Maximum											**8**	**7**	

This exercise emphasises the need for doing such work, as in 2009 it could not have been predicted that there would be more than just minor fluctuations in numbers from year to year. The full set of data shows that there was a rise in numbers from 2009 to the peak in 2013 but this was followed by a decline continuing down to 2020. A supposition is that we are actually experiencing the impact of climate change, in that drier summers are possibly disfavouring this species. It grows in relatively shallow soil and is fully exposed to any sun and dry winds.

[1] Apologies for a few errors in previous reports; the data presented here are the definitive results for the last ten years.

[2] These were the original moonwort quadrats set up in 2009 and used a GPS with the prefix CB.

[3] These quadrats were added in 2011 and the GPS prefix is CM to record adder's tongue.

Pillwort (*Pilularia globulifera*) Monitoring, Vale of York

Strensall Military Training Area

It was alarming that the attempt to monitor the success of pillwort translocation at Strensall Military Training Area (SMTA) proved almost completely fruitless. Even the flagship Pillwort Pond showed no evidence of plants at all during the season. There have been years when it was in short supply, but usually some of the plants became visible when the rains returned towards autumn. At its peak there was an almost complete halo two metres wide around the pond. On 29th May 2020 one small patch was recorded, under water, at Pond 21.

On a positive note, we were able to submit and have approved an article on pillwort for *Sanctuary*, the house magazine for the conservation works done by the army. This was an alert article, intended to inform conservation groups at other military bases of the work we are doing in Yorkshire at SMTA and Foxglove Covert, with the hope that they will wish to take part in translocation and monitoring exercises such as we are doing in Yorkshire.

We have also been approached by fellow members of the SMTA conservation group committee at Huddersfield University, who wish to undertake DNA analysis of pillwort populations across the country. Their aim is to determine if there is significant within-site and between-site variation in genomes of pillwort in the UK. They are currently submitting a grant bid and if successful we will be invited to contribute to this work.

Skipwith Common National Nature Reserve

At Skipwith Common we had previously carried out pillwort translocations as well as monitoring at locations used as the source areas of the translocated plants. In particular we concentrated on Horseshoe Pond, where Mike Wilcox re-discovered pillwort in 2017, recording three distinct patches in the southern portion of the pond, which were confirmed by Barry Wright and Anne Carter. Since then we have made frequent revisits to check on the progress of the Horseshoe Pond colonies as well as undertaking the translocation and subsequent monitoring of other ponds on the reserve.

Two successful translocations had been to some newly created scrapes dug by the Freshwater Habitats Trust under the guidance of Anne Carter. These were 'seeded' by a local ecologist in 2019 and are still present. Pond 2a had a dense cover of pillwort over the central but dry floor – see photo (right) taken by a drone (code named Roger, so that I can say 'I'm taking Roger, out!', or 'can I bring Roger, over!'). Pond 2b had a few small plants.

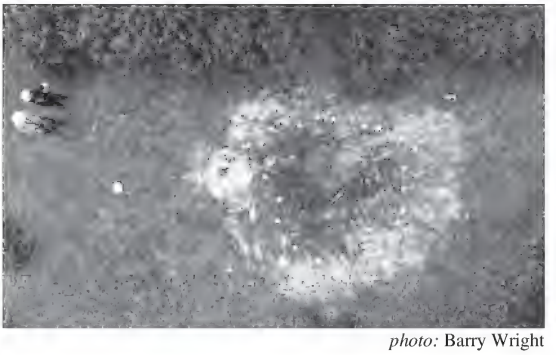


photo: Barry Wright

Pillwort monitoring at Skipwith Common NNR

Drone photo of Pond 2a with the pillwort colony's extent and shape marked with white-faced CDs. To the left is the drone landing pad, and Barry Wright and Anne Carter for scale.

As already published in the BPS autumn newsletter mailing, we had remarkable success at locating new colonies of pillwort at Horseshoe Pond and also witnessed very rapid spread of colonies. We made our first visit on 4th June and a second visit on 6th August, and in that short period some of the colonies had more than doubled in size, one colony increasing from 7.5 to 24 m^2. At Horseshoe Pond we found ten colonies in June, and 15 in August, one of which was very large. Either we missed it completely in June or it very rapidly expanded after we left. If a colony can change so dramatically in one season it has significant implications for monitoring and is a significant problem when trying to make consistent measurements from year to year.

Foxglove Covert, Catterick Garrison – Unfortunately no work was done by the FMG at Foxglove Covert during 2020, although the local coordinator, Elizabeth Dickinson, did add more sites to their translocations. We will check on these in 2021.

SECRETARIAL NOTES

Please note: *names and contact details of all officers can be found on the inside of the front cover of this* Bulletin. *Most of the information below is also on our website www.eBPS.org.uk.*

ANNUAL GENERAL MEETING 2021 – The 118th AGM will take place on Saturday 24th April 2021 at 2:00 p.m. The event will take place online using Zoom, please e-mail the General Secretary to receive the link, which will be sent out on the 17th April.

SUBSCRIPTIONS 2020 – Subscriptions were due on the 1st January and should be paid to the Membership Secretary. Current rates are given inside the front cover of this issue. **Cheques** should be made payable to 'The British Pteridological Society'. Payment can also be made by **PayPal** via our website. **Standing Order** forms are available from the Membership Secretary and the BPS website. Standing Orders may be paid on 1st January or 1st February. In either case, membership is deemed to be from 1st January to 31st December. Any member whose subscription is unpaid on the 31st March shall be liable to have his/her name removed from the list of active members of the Society.

GIFT AID – As a registered charity, the BPS can claim back from the Inland Revenue 25p for every pound paid in the annual subscription for each member who authorises us to do so. In 2020 we were able to claim £1,258. While this is obviously an extremely valuable addition to the Society's annual income, it could be considerably more if all eligible members authorised it. All that is required is a minimal amount of form filling and a second class stamp. Even better, **the form has only to be filled in once.** There are a small number of provisos:

1. Gift Aid is available only to members who reside in the UK.
2. Members on whose subscription Gift Aid is claimed must be paying income tax or capital gains tax at least equal to the amount claimed.
3. Members whose subscriptions are allowed as an expense in connection with their employment may not claim Gift Aid.

Please complete a Gift Aid form if you are eligible.

PUBLICATIONS BY AIRMAIL – Members outside the UK are asked to pay a higher membership fee to cover the extra postage costs of journals. Journals are sent by airmail to all overseas members. Please note that we no longer offer a surface mail option as it is currently more expensive. See inside front cover for rates.

E-MAIL ADDRESSES – These are published in the Membership List 'for members who have a relatively stable e-mail address and who keep up-to-date with their messages' (subject to a current General Data Protection Regulations (GDPR) consent). A supplementary list and amendments are published with the *Bulletin*. For e-mail alterations, please contact the Membership Secretary by e-mail.

E-MAIL NEWSLETTER – We send quarterly news e-mails to those members who choose to have e-mail communication, to remind them of BPS events and services. The information will be included in our paper mailings to those who do not use e-mail. If you have an e-mail address that you use regularly and you would like to have this service and/or you did not receive our Spring e-mail in March, please inform the Membership Secretary.

NOTIFYING CHANGES OF ADDRESS – Please inform the Membership Secretary of changes of address and telephone number. She is responsible for notifying any other officers and appointees who need to know.

CODES OF SAFETY, CONDUCT AND DECLARATION FORM – All members attending Society field meetings should be aware of the Society's *Safety Code* and the *Code of Conduct for picking, collecting, photographing and enjoying wild plants.* Both documents were printed in the 2019 *Bulletin*, and are available on the BPS website. For each meeting you attend, you will be required to sign a Participants Declaration form, which the meeting leader will have, whereby you agree to abide by these Codes.

PAYMENT OF EXPENSES – The Treasurer has *Rules for Seeking Reimbursement of Personal Travelling and Administrative Expenses* by Officers and Members acting on behalf of the Society. Forms for claiming expenses can be obtained from the Treasurer or website.

COPYRIGHT – All contributors to the BPS journals are required to sign an agreement assigning ownership of copyright of the article, photograph etc. to the BPS. This has the aim of safeguarding the contributors' work from unlawful copying and use. It does not stop contributors from using their own work elsewhere provided that they acknowledge the original source of publication.

GREENFIELD FUND – This fund, set up as a memorial to one of our Society's great fern growers, Percy Greenfield, is used to finance approved projects, helping with the cost of necessary equipment, books and travel expenses. Percy Greenfield's interest leaned very much towards the non-scientific side of our activities and it is felt that he would have wanted this taken into consideration when decisions are made. Workers eligible for university or college grants and similar support are not therefore eligible for help from the fund. Anyone wishing to apply for this funding can find details on our website or contact the General Secretary.

CENTENARY FUND – This fund is used to promote the study of all aspects of pteridophytes – horticultural, scientific and educational, whether by amateurs, students or professional pteridologists. As such its scope is much broader and more flexible than the Greenfield Fund. Anyone wishing to apply for this funding can find details on our website or contact the General Secretary.

THE J.W. DYCE AWARD – This award was set up to honour the memory of Jimmy Dyce who was a member from 1935 until his death in 1996. The fourteenth J.W. Dyce Award will be made at the 2021 AGM to the author(s) of the best paper, article, book or other substantial piece of work published during 2020 in any of the three BPS journals, on the BPS website or as a Special Publication. The award, which is a cash prize of £100, is open to everyone, whether professional or amateur pteridologist, horticulturalist or fern enthusiast. Members may nominate an article by contacting the Secretary by the 17th April.

PHOTOGRAPHIC COMPETITION – The annual competition is open to all members of the Society who have an interest in photography and wish to share their fern and fern-related images with others. **This year the competition will be held online** through the Members' Area of the BPS website. Entries (which must be previously unpublished photographs) will be displayed on the website, and winning entries will be decided by members voting online. Winning entries will be included in a special feature in the *Pteridologist* following the competition. In addition, and after judging, any or all of the competition entries received may be displayed on the BPS website for general viewing. Some entries will also be used in the annual BPS fern calendar.

Please see https://ebps.org.uk/meetings/bps-photographic-competition-2021/ for full details.

HORTICULTURAL INFORMATION SERVICE – Members are often looking for help with identification or advice on many aspects of pteridophytes but are reluctant to ask or simply do not know where to obtain help. First stop is the BPS website. Here the team can help with identifications via the 'What's that fern?' page, or direct queries from members to an appropriate specialist. Please make use of this free service.

SPECIAL INTEREST GROUP: CULTIVARS – The Cultivar SIG welcomes anyone with a specialist interest in cultivars. They organise field trips, speakers, garden visits and a newsletter. For information contact Julian Reed (Cultivars@eBPS.org.uk).

BACK NUMBERS OF JOURNALS – There has never been a better time for members to purchase back numbers at very low cost, plus postage – just ask for a price. Many parts are available to fill gaps in your collection, or a photocopy can usually be supplied if we have run out. We hope to have some of the excess journals at our next indoor meeting – it is better to sell them to members than to recycle the paper! Contact Pat Acock who holds the stock (BackNumbers@eBPS.org.uk).

READING CIRCLE – The Society operates a reading circle for the *American Fern Journal*, a quarterly publication containing much information for those seriously interested in ferns. The *Fiddlehead Forum*, which publishes many 'ferny' items of interest to the amateur grower, accompanies it. To receive these journals please contact David Hill (Secretary@eBPS.org.uk).

ROYAL HORTICULTURAL SOCIETY – Our Society is affiliated to the RHS. This enables a limited number of members to enjoy certain privileges in connection with RHS Shows, competitions and services. Some RHS Journals are available free to members. For further information please contact the Treasurer.

BPS WEBSITE – The BPS website is the main platform for the flow of information from the BPS to its members and to the general public. The website provides information on the BPS itself and on any fern-related subject. The general public and members are invited to contribute and even create fern-related blogs without needing to join the BPS, although we always encourage new membership. The website is as interactive as is possible, facilitating all of our traditional activities online. Nearly all the activities listed on this page are available on the website. It is an important part of the philosophy of the website that it is inclusive and the BPS invites everyone to view, interact and contribute. Please do have a look at **www.eBPS.org.uk**. Feedback is actively encouraged to help with site development. The site also has links to all our social media accounts.

PRESERVING OUR FERN HERITAGE – Many BPS members have collections of ferns that they have built up over the years. Some will contain rare plants and cultivars that are no longer easily available. We feel that it is important to preserve these plants and collections where possible. Often, members give clear instructions as to how they want their collection to be dealt with if they are no longer able to care for it themselves, but this is not always the case. Do you or a relative have a fern collection that can no longer be cared for? We have a network of volunteers around the country who can help in various ways, such as advice on how to maintain a collection, what value it may have, how to arrange sale of plants, or re-location to a public garden. Please contact the Membership Secretary in the first instance, so that she can pass on your request to a volunteer local to you.

MERCHANDISE – The BPS has a lovely range of merchandise including sweatshirts, polo shirts, T-shirts, fleeces and baseball caps; these are all dark green with a small embroidered BPS logo in yellow. Other items, such as BPS ties, metal badges, ferny greetings cards, bookmarks, pens, calendars, mugs, jute bags, fern guides and ladies' scarves, are also for sale. **New items** this year include cyanotype cards and a personalised trowel for your favourite gardener. Photos of items for sale can be seen on our website and ordered using PayPal. The organisers Bryan and Gill Smith welcome suggestions for new stock.

BOOKSALES – It is difficult to find second-hand fern books at reasonable prices, so if you are thinking of selling any of your books please consider first offering them to the Society. Frank Katzer would also be pleased to receive any donated or bequeathed books that could then be offered to members at affordable prices. Please contact him by e-mail.

PLANT EXCHANGE – This scheme enables UK members to dispose of surplus ferns to the advantage of those who would like to acquire some different species and varieties. Most of the plants offered are young sporelings. The Exchange is administered using an online system that can be accessed by members from the Plant Exchange page of the BPS website. There, surplus plants can be added to the list and the information necessary to request available ferns can be found. Contact the Plant Exchange Organisers Brian and Sue Dockerill for further details, or to request a current list by post. [Please contact the organisers in advance if you are based overseas, as current export situations are in the process of change.]

SPORE EXCHANGE – The current spore list is published on our website or can be obtained from Spore Exchange Organisers Brian and Sue Dockerill. The Spore Exchange is open from the 1st January until the end of March each year.

NURSERY ADVERTISEMENTS – Members with nurseries that offer ferns are reminded that they may place an advertisement in the *Bulletin*, *Pteridologist* and on the website free of charge in return for the inclusion of a note about the Society in their catalogues/ websites. If members wish their nursery to be included, in the first instance please contact the General Secretary.

COULD YOU HELP? – The day to day activities of the Society are all carried out by volunteers, from editing publications and maintaining the website, to dealing with book sales and answering horticultural enquiries. This is overseen by various working groups and ultimately the BPS committee who also act as trustees. The diversity of interests and backgrounds enables the committee to tap in to many different skills, ultimately helping to keep a balanced outcome for the membership. The natural ebb and flow of committee members means that we are currently looking for members for both current and upcoming vacancies. There are currently six vacancies on the **Committee**, including the post of **Publicity Officer**; next year we will need a **Treasurer** and **Membership Secretary**. By advertising now, it is hoped that volunteers will come forward to shadow those already in post. If you might be able to help, in the first instance please contact the Committee Secretary who will put you in contact with the post holder for an informal chat about what is involved and what may be required. Your help will be gratefully received, you'll make some good friends and help ensure the continued success of the Society.

PUBLICITY and MARKETING – We are looking for individuals who can help with the role of Publicity Officer. If you can help with publicity, social media and/or marketing, or if you have a particular area of interest (shows, meetings, digital content, graphics, photography, filming, writing, illustration or other) and you feel you may be able to help in any capacity, however small, please start by contacting the General Secretary.

EDUCATION – The Education Subcommittee would be very pleased to hear your ideas on how we can develop the educational role of the BPS. If you have information about any fern-related educational initiatives or resources that you have found useful, please contact the Education Officer.

FERN RECORDS – Members are encouraged to record and submit fern, horsetail, clubmoss and quillwort records whenever possible. Records can be submitted directly to the BPS Recorder, Fred Rumsey, via e-mail (Recorder@eBPS.org.uk) or using the BPS recording sheet, or via the BPS website using the Living Record page. The BPS recording sheet is available on our website or directly from Fred.

FORTHCOMING EVENTS IN 2021:

FERNS IN FOCUS, BRAZIL. An international symposium on lycophyte & fern research including evolution, conservation, biogeography, genetics and development. The 2020 conference has been postponed until July 2021. See www.fernsinfocus2020.com/

At the time of going to press, the current Covid situation has prevented many shows, exhibitions and events from confirming dates or exhibition arrangements. As soon as details become available, they will be made available on the BPS website.

We do have dates for the following public events where it is hoped to have a BPS presence. Please consider helping with or supporting them, but do be aware that dates and arrangements may change.

RHS GARDEN WISLEY, PLANT SOCIETIES WEEKEND, 19th-20th June. A display of ferns and ferns for sale. An opportunity to showcase the Society's activities. Please contact Jude Lawton to help (judelawton@btinternet.com).

RHS WISLEY FERN AND CARNIVOROUS PLANT SHOW, 24th-25th July. Following the continuing successes of displays in previous years, we have again been invited by the RHS to promote the BPS and ferns. Please contact Julian Reed to help.

SOUTHPORT FLOWER SHOW, 19th-22nd August. A chance for you to help at the show, enthuse to the public about ferns and/or display your ferns to try and win in various display categories. Please contact Alison Evans if you would like to take part.

FERN COURSES IN 2021:

The same predicament applies to courses, and most educational providers are having to alter their course provision. Most face-to-face events have been cancelled or are subject to last minute changes. Please see the Society website, where we will add details of courses as we find them. If you become aware of events that may be of interest to members, please send details to the Webteam.

ANNUAL GENERAL MEETING 2020

MINUTES of the 117th Annual General Meeting of the British Pteridological Society held on Saturday 3rd October 2020 by Zoom digital conferencing at 10:30 hrs.

IN THE CHAIR: The President, Dr Alison Evans.

PRESENT: Pat Acock, Peter Blake, Rob Cooke, Brian & Sue Dockerill, John Edgington, Mary Gibby, Roger Golding, Marian Goody, Vanessa Griffiths, Nick Hards, Ann Haskins, Elise Knox-Thomas, Bridget Laue, Andrew Leonard, Howard Matthews, Steve Munyard, Alison Paul, Martin Rickard, Fred Rumsey, Bryan & Gill Smith, Matt Stribley, Franziska Wittenstein.

PRESIDENT'S INTRODUCTION: The President thanked everyone for attending this highly unusual and delayed AGM. She regretted not being able to meet everyone in person but thanked David for organising this alternative format. She also welcomed our new Publicity and Communications Officer elect, Franziska Wittenstein, who had been working alongside Sophie Walwin. Maintaining our public profile and communications with members was vital at this time, and she was particularly grateful as both Ziska and Sophie had busy lives outside the Society.

During her year as President-Elect, she had sought advice from previous Presidents on what the role involved, and one common piece of advice was 'keeping the show on the road' – but what road was that? One thing was clear, it involved a lot of work by volunteers, many of whom were here today. Another was that we were a society of friendly, knowledgeable enthusiasts and she would like to foster both these strengths of our Society.

But how might we improve in future? One area she was interested in was reducing our carbon footprint. The use of Zoom meetings may have been imposed upon us, but we may well be able to take forward the best aspects of this and reduce travel on a more permanent basis in the coming years. Journal packaging was also moving to 100% recyclable materials. Is there more we could do?

Making as good a use as possible of the vast expertise on pteridophytes held within the Society Alison also felt was important. Enhancing our fern recording by using the data for fern population monitoring was a good addition to our work. Publications continued to be popular and helped spread information about ferns, and this would continue with Fred's book on the British fern flora and other titles in discussion. With the recruitment of Sophie and Ziska, we should be using social media to broaden the range of people we were able to spread our knowledge amongst, particularly the next generation of fern enthusiasts. She encouraged all members to send any short articles, stories, pictures or videos that might be of interest to a wide audience to either Sophie or Ziska.

Her final area of interest was the democratic accountability of the Society. Perhaps the nomination process for officer and other elected posts could be made more inclusive of the membership in general. There is a lot to think about for the future, but in the meantime she welcomed us to the 117th AGM.

Item 1 – APOLOGIES FOR ABSENCE: Terence Hackwill, Frank Katzer, Julian Reed, Paul Ripley, Ann Robbins, Sophie Walwin.

Item 2 – APPROVAL OF THE MINUTES: Minutes of the 116th Annual General Meeting of the British Pteridological Society held on Saturday 13th April 2019 and published in the *Bulletin* (Vol. 8, No. 6) were approved and signed by the President.

Item 3 – MATTERS ARISING: There were none.

Item 4a – REPORT OF THE GENERAL SECRETARY: This report by David Hill was published in the *Bulletin* (Vol. 8, No. 6). How the world had changed since that report was written! David showed pictures of events from last year – the AGM at Harlow Carr and Committee meetings at Cambridge and Edinburgh Botanic Gardens. When would we next have meetings like those? But it was not all about temporary suspensions – our digital outreach had moved forward rapidly due to the Covid outbreak, including the Society's YouTube channel and cyanotype project. Also the launch of the new Conservation Committee and co-ordinated monitoring project is an important step forward.

Item 4b – REPORT OF THE TREASURER: The Society's accounts for 2019 were published in the *Bulletin* (Vol. 8, No. 6). Our Treasurer, Peter Blake, reported that our in-hand balance remained comfortable and hence our finances were strong. We had sufficient reserves in the Graham Ackers Fund to cover the costs of publishing Fred's fern flora and had no other major on-going commitments that could jeopardise this secure situation. He noted that the presentation of the finances for Publications were now incorporated into the main accounts, rather than being listed separately. He was grateful to Peter Grimbly for his help in preparing the accounts.

Andrew Leonard was concerned that the costs and returns on individual publications was no longer being provided in the notes on the accounts and hence to the general membership. There was some discussion about the practicality of this and the best ways to meet this need. It was agreed that the Committee would review what was possible, bearing in mind the comments and suggestions made.

Item 5 – OFFICERS' REPORTS: The Officers' Reports were published in the *Bulletin* (Vol. 8, No. 6). The following summarises updates and discussion at this meeting.

Membership Secretary. Ann Robbins had sent an update showing that membership figures were holding up well, despite the lack of meetings within the Society. Current membership levels (as of 27th September 2020) were 726 active members, and 56 family memberships.

Publicity and Communications. Nick Hards asked what individual members could do to support this aspect of our activities? He had produced some material for his local natural history society, which they disseminated through social media. Could we encourage similar input to our website and social media platforms from the general membership? Ziska reported that she was always happy to receive input from members, and that anyone with any social media accounts could use those to promote the Society's website, noting in particular social media hashtags e.g. #FernFriday. It was also a good idea to include the information that you were a BPS member, as this brought the existence of the Society to the notice of more people. Andrew suggested that Ziska write some notes on this for the FAQ section of the website.

Item 6 – COMMITTEE APPOINTEES' REPORTS: The Committee Appointees' Reports were published in the *Bulletin* (Vol. 8, No. 6). The following update was given:

Merchandise. There had been a large surge in online orders for merchandise in 2020, and this had more than offset the lack of orders at events.

Item 7 – ELECTIONS

Vice-Presidents. Matt Busby and Adrian Dyer had both served four terms but were standing for re-election for a further three-year term. Matt's re-election was proposed by Nick Hards and seconded by Martin Rickard. Adrian's re-election was proposed by Alison Paul and seconded by Mary Gibby. Both were approved with all in favour.

Our other Vice-Presidents are Rob Cooke, John Edgington, Roger Golding and Robert Sykes.

Committee Secretary. Sue Dockerill was standing for election. Proposed by David Hill and seconded by Fred Rumsey with all in favour.

Publicity and Communications Officer. Franziska Wittenstein was standing for election. Proposed by Bridget Laue and seconded by David Hill with all in favour.

Officers. The following Officers were available for re-election en bloc; this was proposed by Ziska Wittenstein and seconded by Elise Knox-Thomas, with all in favour. [**General Secretary**: David Hill, **Treasurer**: Peter Blake, **Meetings Secretary**: Bryan Smith, **Membership Secretary**: Ann Robbins, **Conservation Officers**: Fred Rumsey and Heather McHaffie, **Publications Secretary**: Martin Rickard, ***Fern Gazette*** **Editor**: Mary Gibby, ***Pteridologist*** **Editor**: Alec Greening, ***Bulletin*** **Editor**: Alison Paul, **Website Co-ordinator**: Bridget Laue, **Publicity and Communications Officer**: Sophie Walwin, **Education Officer**: Gill Smith.]

Elected Committee Members. Brian Dockerill, Elise Knox-Thomas, Steve Munyard, Julian Reed, Laurence Sutton and Barry Wright were standing for re-election en bloc; this was proposed by Rob Cooke and seconded by Martin Rickard with all in favour. Mike Canaway had resigned from the Committee. No nominations for additional Committee members had been received.

Rob Cooke commented that the provision of short biographies for those standing for key posts may help introduce those standing to the membership. This will be reviewed at a future committee meeting.

Committee Appointments. There were no changes.

Item 8 – APPOINTMENT OF INDEPENDENT EXAMINER

The President expressed her thanks that Barrie Buels was willing to continue as Independent Examiner.

Item 9 – AWARDS

J.W. Dyce Award. David Hill announced the winners of this, the 13th award as follows:

3rd Yvonne Golding: Growing ferns in limited space (*Pteridologist*)
2nd Martin Rickard: *Polypodium cultivars and species* (Special Publication No. 16)
1st Michael Hayward and Martin Rickard: *Fern albums and related material* (Special Publication No. 15)

Honorary Membership. The President was very pleased to announce the award of Honorary Membership to Alison Paul and Martin Rickard in recognition of the huge contributions they had each made to the Society over many years. Just a small way for us to give them a very big thank you. Both Alison and Martin expressed their thanks and pleasure at this award. [See citations on pages 76 and 77.]

Item 10 – ANY OTHER BUSINESS

Bridget Laue raised the international symposium to be held in Rio in 2021. Would anyone from the Society be attending? As there was uncertainty about both the event and travel, this could not be decided at this point.

Gill Smith raised a request from The Field Studies Council for help with preparing materials for updated courses on ferns. This would be discussed at the next committee meeting.

There being no other business, the President closed the meeting at 11:39 hrs.

Sue Dockerill
Committee Secretary

BPS ACCOUNTS FOR 2020

	2019	2020
ORDINARY ACCOUNT		
INCOME		
Subscriptions (*see note 1*)	£19,841.62	£20,361.12
Booksales (*see note 6*)	£618.00	£131.30
Merchandise (*see note 6*)	£1,159.32	£1,788.59
Publications (*see note 5*)	£8,523.24	£3,924.16
Inland Revenue Gift Aid	£1,358.81	£1,258.25
Donations	£336.01	£443.00
Plant Sales & Spore Exchange	£393.40	£210.00
Prize Money	£200.00	-
Miscellaneous	-	£68.06
TOTAL INCOME	**£32,430.40**	**£28,184.48**
EXPENDITURE		
Pteridologist	£5,319.70	£5,467.54
Fern Gazette	£4,183.87	£4,277.97
Bulletin	£5,613.95	£6,469.59
Administration & Postage	£780.79	£1,058.05
Subscriptions to Societies	£95.00	£145.00
Plant & Spore Exchanges	£209.61	£172.52
Merchandise (*see note 6*)	£927.91	£1,598.66
Publications	£8,442.00	£5,245.14
Trustees' Expenses (*see note 7*)	£366.27	£140.00
Booksales (*see note 6*)	£330.00	£382.07
Special Awards	£200.84	-
Autumn Mailing	£453.06	-
Promotion & Advertising (*see note 4*)	£2,054.00	£180.00
Insurance	£357.20	£355.20
Donations/returned overpaid fees	£618.40	-
Bank Charges (*see notes 2 & 3*)	£344.16	£490.60
TOTAL EXPENDITURE	**£30,296.76**	**£25,982.34**
Balance (income minus expenditure)	**£2,133.64**	**£2,202.14**
Brought Forward from previous year	£14,971.85	£33,806.52
Transfer from Publications Account	£16,701.03	-
Total in Ordinary Account	**£33,806.52**	**£36,008.66**
RESERVE FUND		
Transfer from Ordinary Account	£20,133.32	-
Brought Forward from previous year	-	£20,265.20
Interest	£131.88	£61.87
Total in Reserve Fund	**£20,265.20**	**£20,327.07**
CENTENARY FUND (Restricted Account)		
Interest	£40.18	£18.85
Interest brought forward from previous year	£550.63	£590.81
Total Interest	**£590.81**	**£609.66**
Capital brought forward from previous year	£5,583.73	£5,583.73
Total in Centenary Fund	**£6,174.54**	**£6,193.39**

GREENFIELD FUND (Restricted Account)

Interest	£19.18	£8.28
Interest brought forward from previous year	£2,141.55	£1,660.72
Travel Grant	-£500.00	-
Total Interest	**£1,660.72**	**£1,669.00**
Capital brought forward from previous year	£1,051.00	£1,051.00
Total in Greenfield Fund	**£2,711.72**	**£2,720.00**

GRAHAM ACKERS FUND

Brought forward from previous year	£14,742.05	£14,838.61
Interest	£96.57	£45.30
Total in Graham Ackers Fund	**£14,838.61**	**£14,883.92**

SUMMARY

Ordinary Account	£33,806.52	£36,008.66
Reserve Account	£20,265.20	£20,327.07
Centenary Fund	£6,174.54	£6,193.39
Greenfield Fund	£2,711.72	£2,720.00
Graham Ackers Fund	£14,838.61	£14,883.92
Total Funds	**£77,796.60**	**£80,133.04**

REPRESENTED BY

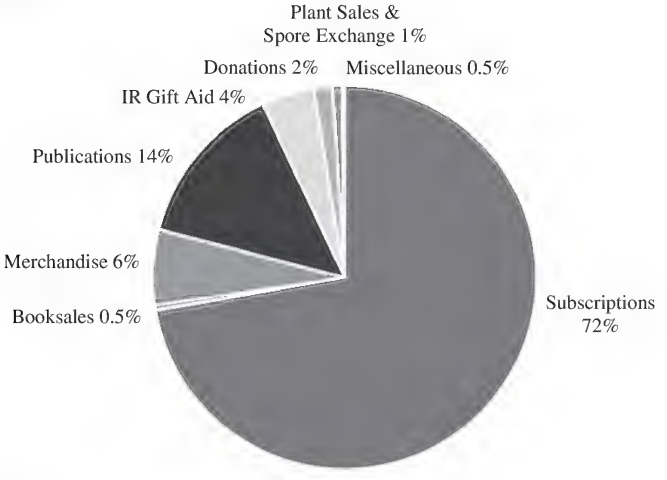
Charitable Organisations Investment Fund (COIF)	50,857.69	50,991.99
NatWest Bank & Others	26,938.91	£29,141.05
Total Funds	**£77,796.60**	**£80,133.04**

NOTES TO THE ACCOUNTS

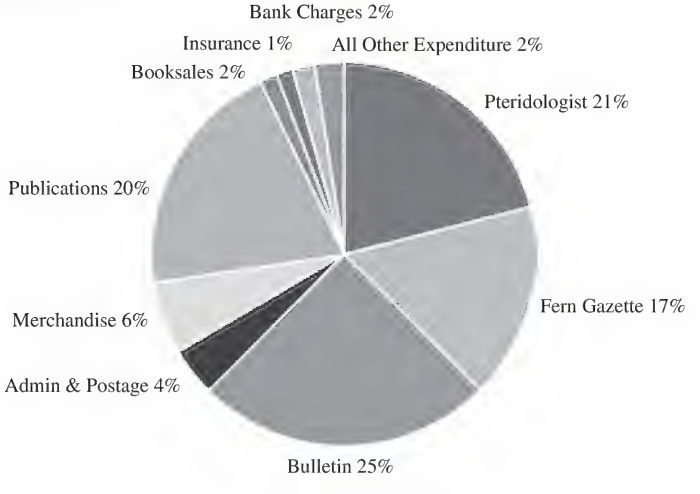
1. The accounts reflect the subscriptions received in the year.
2. Transaction charges are levied by NatWest and PayPal. All payments received via PayPal into the bank are net of the bank charges included here. Payments received via NatWest are received gross and the charges included here are levied separately.
3. The Society is now using internet banking as some service providers are no longer accepting cheques.
4. Promotion and advertising has been reduced in 2020 due to the Covid-19 restrictions. There were no shows or displays. However, close contact has been kept with the RHS with the intention of being involved in the 2021 Specialist Plant Society Show.
5. The income from Special Publications was particularly high in 2019 at £8,523, due to the publication of SP16 *Polypodium cultivars and species*. In 2020, total income was £3,924, with that from SP16 1st & 2nd editions being approximately £2,000, with plenty of stock remaining.
6. Merchandise stock is valued at £2,000 and Booksales at £5,500 with an additional £5,819 capital. These accounts are reviewed by the Treasurer.
7. The AGM and Committee meetings were held on Zoom, with consequent savings on travel expenses.

Peter Blake, Treasurer

INCOME 2020



EXPENDITURE 2020



BRITISH PTERIDOLOGICAL SOCIETY
INDEPENDENT EXAMINER'S REPORT FOR THE YEAR ENDED 31 DECEMBER 2020

I report to the trustees on my examination of the accounts of the above charity for the year ended 31 December 2020.

As the charity's trustees, you are responsible for the preparation of the accounts in accordance with the requirements of the Charities Act 2011 ('the Act').

I report in respect of my examination of the charity's accounts carried out under section 145 of the 2011 Act and, in carrying out my examination, I have followed all the applicable directions given by the Charity Commission under section 145(5)(b) of the Act.

I have completed my examination. I confirm that no material matters have come to my attention in connection with the examination which give me cause to believe that in any material respect:

- the accounting records were not kept in accordance with section 130 of the Charities Act; or
- the accounts did not accord with the accounting records; or
- the accounts did not comply with the applicable requirements concerning the form and content of accounts set out in the Charities (Accounts and Reports) Regulations 2008 other than any requirement that the accounts give a 'true and fair' view, which is not a matter considered as part of an independent examination.

I have no concerns and have come across no other matters in connection with the examination to which attention should be drawn in this report in order to enable a proper understanding of the accounts to be reached.

Independent Examiner: Barrie Buels FCCA FCIE, 3 March 2021
Crestmere Limited, Chartered Certified Accountants

REPORTS OF OFFICERS & COMMITTEE APPOINTEES FOR 2020

OFFICERS' REPORTS

GENERAL SECRETARY – David Hill

From a BPS perspective, January and February is an odd time of year for me. I can't wait for spring, planning trips and aiming to get out from behind my computer screen. At the same time, I have to look back and wrap up the previous year, reminding myself of what has happened and reviewing my list of outstanding actions before the first committee meeting of the year.

I rounded up the last General Secretary's report by noting our step into a new decade and the many changes ahead. Little did I realise quite how prophetic my comments were, and how quickly things would change.

In April the Executive held an emergency meeting to discuss Covid implications for the year ahead. The first major casualty to the calendar was cancellation of the AGM, which had been due to take place at the Natural History Museum. Subsequently the rest of the committee deftly moved online, and I must admit I was pleasantly surprised at how quickly all involved adapted to the change. The May and October Committee meetings, which had been due in Norwich and Chester respectively, were replaced with living room backdrops and mugs of tea. All were pleased to see each other but are still looking forward to face-to-face meetings. That said, my 4 a.m. start to catch a train to London was certainly not missed, and the combined carbon saving of the committee was a positive side effect.

As the year progressed, different infection rates and varying national lockdown restrictions both accentuated how far apart a lot of us felt, but also strengthened a combined sense of business as normal.

Initially the AGM had been postponed in the hope that it could be run in the summer but as the year progressed more and more things were cancelled. Statutory reporting requirements meant we couldn't put off the AGM any longer, and our first electronic AGM happened on Saturday 3rd October (reported separately). Matt Busby and Adrian Dyer were re-elected as Vice-Presidents, Sue Dockerill was formally elected as Committee Secretary, and Franziska Wittenstein as Publicity and Communications Officer to work alongside Sophie Walwin.

One event that really does lose its shine in an online meeting is the awarding of Honorary Memberships. Normally a heartfelt celebration of thanks, the awards this year to Alison Paul and Martin Rickard were no less deserved, but will need a proper in situ celebration as soon as the situation permits.

Society meetings, training events and shows were all casualties of the ongoing pandemic, but other aspects have flourished. Sophie and Ziska's cyanotypes project got off the ground, fern courses moved online, we have a YouTube channel, merchandise sales are up and the progress in online working has led to increasing international outreach.

2020 was certainly a year to remember, or forget, and I know some aspects have been particularly difficult and isolating for far too many. As a 'Brexited' nation stumbles towards a 'new normal' there is at least consolation in knowing that the ferns will still be waiting for us when we return, and I suspect a renewed interest in the natural world will lead to a flourish of full field trips, and horticultural interest in ferns will increase. I know as a Society that many are itching to get back out into the field, myself included. Please help by contacting your local group organiser and offering to show people your local patch when you feel safe to do so.

Yet despite all this change I can still report some consistency. I still have the intention of getting out from behind my computer screen (it certainly didn't happen last year), and I am still trying to wrap up the previous year!

MEMBERSHIP SECRETARY – Ann Robbins

During 2020, 104 people joined or re-joined the Society. Of these, 87 live in the UK, 13 in Europe and four in the Rest of the World; 81 are full members, nine are students, 12 optional members and two are new subscribers. There were three new family members.

During 2020, 101 people left the Society: 80 lapsed, 19 resigned and two died, Mr Melville Thomson in May and Mrs Fay Mandt in August.

As of 31 December 2020 we had 752 'Active' members plus 57 family members. This was made up as follows:

Full members	538
Optional members	124
Honorary members	10
Complimentary members	7
Students	25
Subscribers	48

MEETINGS SECRETARY – Bryan Smith

We began 2020 looking forward to another busy year of meetings. These were to include outdoor meetings in Cumbria (July), Seattle, USA (August), Scotland (September), South-East Fern Cultivars (September) and South Devon (September). For indoor meetings, the AGM was to have been at the NHM, London (April) with several illustrated talks on tropical and sub-tropical ferns, and the Autumn Meeting should have been in Staffordshire (November) with talks about Victorian ferneries. There should also have been four shows – the BBC Gardeners' World at the NEC Birmingham (June), the Plant Societies weekend at Wisley (June), a BPS fern display weekend at Wisley (July) and the Southport Flower Show (August).

In the event, the coronavirus pandemic put paid to all of these, and none of the meetings were held. However, we did manage to hold the business part of the AGM virtually in October, and a small socially distanced party did some reconnoitring in Devon in September. Some of the Regional Groups also managed some fieldwork, and these excursions are reported elsewhere in this *Bulletin*.

The Meetings subcommittee did not hold its usual annual get-together early in the year, but we did progress updating the BPS Safety Code and Code of Conduct, and the revised versions appeared in last year's *Bulletin*. Also, the revised Codes and the Generic Risk Assessment for Field Meetings were put on the website. The Meetings Declaration form was updated and copies of this, the two codes, the Generic Risk Assessment and a Risk Assessment form were circulated to Regional Group leaders for their meetings.

At the time of writing, there is still much uncertainty about when and if meetings will be held during 2021, but meetings planned for 2020 will be carried forward if possible, either to 2021 or to 2022. The Meetings Subcommittee will continue to hold its annual meeting and, as approved by the Committee, Regional Group leaders will be invited to attend. It is likely that these annual meetings will be held virtually.

PUBLICATIONS SECRETARY – Martin Rickard

Despite the difficult year making face-to-face meetings impossible most of the time, our publications have kept up the high standard of recent years with a flow of interesting features and general Society news, although the *Bulletin* is rather different from normal.

There were very few Society meetings for the *Bulletin* to report, but this shortfall has been largely filled by members reporting on their own ferny activities. We know that the membership will appreciate the effort of editor Alison Paul in encouraging contributions, and hopefully there will be more for the coming season if, as expected, the same problem

with face-to-face meetings continues. Short notes of a type not normally published in the *Pteridologist* could be considered, e.g. observations on unusual sites, newly noticed arrivals or losses on private walks, perhaps even for a particular road near your home, or fern interest in a local wood, mountain, bog or hedgerow. Please send potential items to Alison.

The *Pteridologist* still brings a huge number of items to members; please keep supplying copy to Chris Evans. We have already passed the deadline for this 2021 *Pteridologist*, but it is good for Chris and Alec Greening to have material in reserve, and depending on the situation at any given time late submissions might be squeezed in.

Our *Fern Gazette*, now 112 years old, continues to publish more scientific material allowing the Society to keep its relevance in worldwide pteridophyte research. Mary Gibby and her team are to be congratulated on a difficult job well done. As numbers of specialist pteridologists fall in Europe and North America, more and more research is being done in East Asia. Good quality papers become scarcer, especially in English, yet still they come, largely due to Mary's editorial team from across several continents.

Special Publications continue to be popular within, and beyond the Society – spreading the word! The monograph on *Polypodium* cultivars and species worldwide was launched in autumn 2019. Gratifyingly selling out by spring 2020, the opportunity was taken to reissue it as a slightly modified second edition, which appeared in autumn 2020. Unfortunately, it could not be launched at a Society meeting but sales have again been very good. For the future we hope that a monograph of *Athyrium* cultivars by Ian Unsworth will appear in the next few years, followed by an in-depth survey of variation in *Asplenium scolopendrium* by Tim Brock. That will give us modernish coverage of four of the main species groups of cultivars (with *Polystichum* and *Polypodium* done already). Just *Dryopteris* and 'odds and ends' left. By the time they appear it will be time to start again at the beginning!

Fred Rumsey's new British fern flora looks very exciting. Fred has prepared a few sample pages for the Committee to see. If the rest of book keeps to that high standard it will be a remarkable tome which could be a standard for many years. I cannot wait!

I hope that everyone is continuing to look at Mark Border's amazingly up-to-date Cultivar Group Newsletter on the BPS website. He frequently reports on cultivars new to me and to horticulture generally. He has developed a network of international fern enthusiasts who often make their new discoveries known to him. Don't miss it!

***FERN GAZETTE* EDITOR-IN-CHIEF – Mary Gibby**

Despite the lockdown in spring, we were lucky with the support from our printers and were still able to distribute Volume 21 Part 3 in May, followed by Part 4 in November. We had no review articles this year, but published research articles on a wide range of topics, including fern records and distributions in Iran, India and Mexico, a new hybrid cultivar, taxonomy of *Asplenium* in the Philippines and a new hybrid *Asplenium* from the Azores. I am very grateful to Andrew Leonard, the Production Editor, who continues to provide a key role; his introduction of colour images in the *Gazette* has greatly enhanced the presentation of the articles. Adrian Dyer, Bridget Laue, Klaus Mehltreter and many reviewers have helped maintain the quality of the *Gazette*, and I thank them all.

***PTERIDOLOGIST* EDITOR – Alec Greening**

The 2020 *Pteridologist* was published on July 12th and ran to 84 pages plus covers. The pandemic limited travel to ferny places but there were plenty of interesting articles to keep members happy. The layout has changed slightly but the biggest change was that I decided not to print contact details or show images of the authors because of the data protection act. Members who want to contact authors were invited to do so through me. There were a few complaints about this decision, for various reasons, and some contact details will appear in the next issue. Jenny Hakney, a professional proofreader, was invaluable in spotting mistakes. She is an asset to the team along with my co-editor Chris Evans.

The 2021 issue already looks very promising. If you have an article that you would like published please contact Chris Evans as soon as possible at receiving@eBPS.org.uk and we will do our best to include it in this edition.

***BULLETIN* EDITOR – Alison Paul**

Due to be printed just as the UK went into its first lockdown of the pandemic, the 2019 *Bulletin* was delayed for a few weeks while the Printers worked out their new Covid-safe modus operandi. Due to postponement of the AGM, however, this timing was not critical.

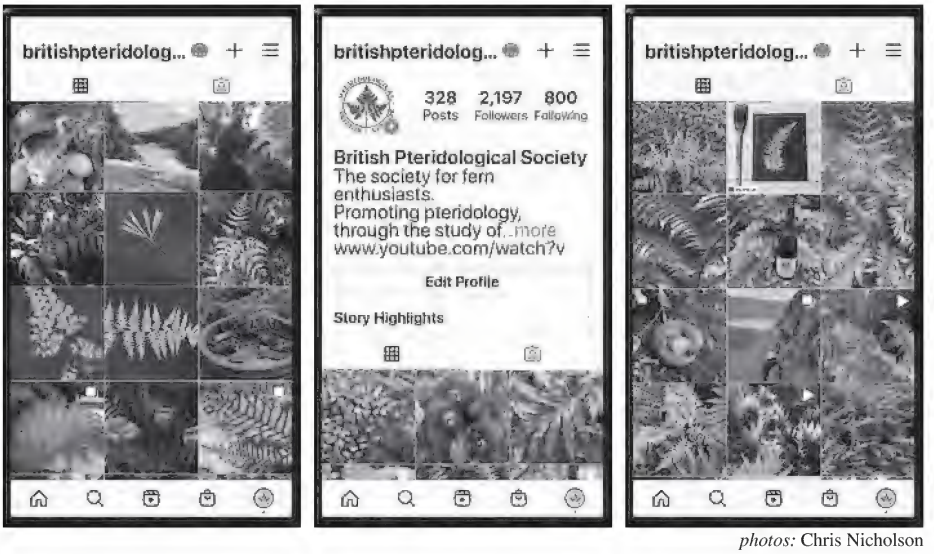
With almost all Society meetings being cancelled in 2020, this *Bulletin* is inevitably somewhat slimmer than in most recent years (80 pages). However, in spite of having virtually no official meetings to report, Regional Groups came up with many items of interest; many thanks to all contributors, and in particular to Pat Acock and Paul Ripley for their history of the South-East Group. Martin Rickard deserves special thanks for producing, at rather short notice, an overview of BPS meetings covering 150 years! I hope you find it as fascinating as I did. Our Archivist, Michael Hayward, also came up trumps with some great early photos to accompany it. A new feature is the Fern Monitoring Group report.

Huge thanks are due to Peter Elcock for again expertly compiling a really useful *Bulletin* Index, this time to Volume 8.

WEBSITE CO-ORDINATOR – Bridget Laue

In 2020 more than ever we found our website to be essential since everyone was using the internet for so many reasons. 'Real' meetings were, and still are, limited, but interesting virtual meetings, lectures and programmes relating to ferns can be found via our website, listed on the left-hand side of the home page. The BPS website saw significant increase in activity, with over 40,000 users – mostly from the UK and USA – of whom 10% were new users. There was also a healthy increase in sales of merchandise and Special Publications using PayPal on the website, as well as membership applications. As always, a huge thank you to Andrew Leonard for his valuable management of the website, both in his technical skills and also his content contribution.

The website is also linked to our Social Media groups. They can be accessed from the BPS website using the icons on the left-hand side of the home-page screen. All these accounts invite viewers back to the BPS website for more information.



photos: Chris Nicholson

Examples of Instagram posts

Fern World on Facebook, managed by Alison Evans, now has 2,174 'followers'. As far as possible, fern pictures are posted every Friday for 'Fern Friday', and interesting posts from other fern societies are shared. There are also some specialist fern groups on Facebook run by BPS members – the *Polypodium* cultivar group, the *Dryopteris* species, hybrids, and cultivars group, the *Polystichum* group, and the *Athyrium filix-femina* cultivars group. A good place to discover new things and keep up to date with what is happening in the cultivar world.

We also have a dedicated YouTube channel – search British Pteridological Society on YouTube for a range of informative videos.

Our Instagram account, managed by Chris Nicholson, has 2,197 followers.

As always, we welcome comments, participation and contributions. We would also welcome anyone who is interested in getting involved in the Webteam.

CONSERVATION OFFICER – Fred Rumsey

With little else to report in this strangest of years, I would draw members' attention to potential forthcoming changes in conservation legislation. Every five years, the country nature conservation bodies (Natural England, Natural Resources Wales and NatureScot), working jointly through the UK Joint Nature Conservation Committee (JNCC), review Schedules 5 and 8 of the Wildlife and Countryside Act (WCA) 1981. The review will provide recommendations to the Secretary of State for the Environment, Food and Rural Affairs and to Ministers for the Environment in the Scottish Government and Welsh Government for changes to these schedules. This is known as the Quinquennial Review (QQR). A seventh QQR is now underway, giving us a chance to propose changes to the species accorded special legal protection. This time, however, clearer guidance has been given as to the qualifying eligibility criteria. These have been revised and have seen the integration of the IUCN Red-Listing categorisation into the process, such that only the species considered as at imminent threat of extinction, i.e. Critically Endangered or Endangered, can now be scheduled. Of the six fern species currently protected, only one, *Woodsia ilvensis*, would meet the new criteria. The guidance circulated suggests that Vulnerable species listed on the existing schedules will be evaluated by the QQR Inter-agency group to check their conservation dependence on the protection afforded by the schedules. This would account for a further two species: *Ophioglossum lusitanicum* and *Equisetum ramosissimum*, although it is still unclear whether if their survival were deemed conservation dependant they would still be accorded legal protection. *Vandenboschia speciosa*, which has since the discovery of its gametophyte been listed as Least Concern and has probably retained its protected status largely by virtue of European legislation, may come to rue Brexit!

It is important to emphasise that endangerment, on its own, is not seen as sufficient justification for recommending a species for scheduling. Many species will be endangered principally due to changes in land-use or land management leading to increased habitat fragmentation, deterioration or outright habitat loss. Such causes of endangerment do not, for the purposes of the QQR 7, constitute 'direct human ('reckless' in Scotland) pressures' as covered by Sections 9 and 13 of the WCA. To be recommended for scheduling, the endangerment of a species must, at least in part, be due to one or more of the direct human pressures listed in the Decision Criteria. For plants these very much focus on picking and trade.

Many had been dissatisfied by the past inconsistent approach to scheduling. The law was being employed to effectively protect sites, in lieu of any other meaningful legislation to accomplish this. This is clearly in the minds of those who have drafted the new guidance. Returning it to its original intention, protecting those threatened species particularly attractive

to collectors, I can accept, but only if we also have stronger legislation protecting habitats that is properly enforced! I will very much be fighting the corner of our plants during the consultation process, through my involvement in Red-List and agency Taxon Groups.

At a time of economic difficulty, possible post-Brexit de-regulation removing protective legislation and facing a global climate emergency, the future prospect for our countryside looks bleak indeed. I feel we must be vigilant and hold those to task who are responsible for our environmental health.

EDUCATION OFFICER – Gill Smith

We had our annual meeting in February 2020, never thinking that all the plans we were putting together would be 'scuppered' by Covid! Consequently, I do not have much to report for the last year. BBC Gardeners' World was cancelled, all the RHS events were cancelled, and even our face-to-face meetings were cancelled.

Just one small light in the darkness though – in September I was contacted by the Field Studies Council asking me to take part in a Zoom meeting about new online courses that they were hoping to set up in the immediate future. They wanted to discuss how the BPS might collaborate with the FSC in 2021 by advising on course content or recruiting members as tutors. The Education Subcommittee and also the main BPS Committee were in favour of helping with this, so we are slowly progressing this project.

Apart from that, I have had many contacts via the Website from the general public seeking information, which I have followed up and encouraged other members to help with. Some of these conversations have been prolonged and enthusiastic, so hopefully may have resulted in new members.

At the time of writing this report, we are still unsure whether or not we will be able to do any events in 2021.

PUBLICITY & COMMUNICATIONS OFFICERS – Sophie Walwin & Franziska Wittenstein

We produced three newsletters in 2020 (spring, summer and autumn) and we hope you enjoyed them and found them uplifting in these challenging times. Thank you to everyone who contributed to the content and to Membership Secretary Ann Robbins for sending it out to our members so professionally.

Our social media pages continue to successfully engage with members and the wider web community. Our Twitter feed steadily gains followers and we try to post a new fern-related story or plant feature each week, but the pace has been difficult to maintain without new material being shared with us. Retweets (and 'regrams' on Instagram) are essential to ensure fresh topics and images appear on our feeds.

Franziska and I launched a cyanotype artwork project, 'Ferns out of the blue', in the summer, which received a lukewarm response after an initial flurry of shared images. Franziska produced an amazing video to demonstrate the process, which features on our YouTube channel. This project could be re-launched in the future – and perhaps the process could feature at shows as the effects are quick to produce and could be a new way to engage with the public – especially children.

COMMITTEE APPOINTEES' REPORTS

RECORDER – Fred Rumsey

Unsurprisingly in a year of lockdowns and almost entirely curtailed group recording activities there is rather less for me to report. Many of us have made the most of our allowed recreation and as a consequence have become much more aware and appreciative of our local areas. For me this led to the discovery of *Dryopteris cycadina* established in

woodland close to habitation by Fleet Pond and new to Hants. Its discovery has recently been reported to me from a range of English vice-counties and it is probably our fastest increasing alien. The commonest alien is still, however, *Cyrtomium fortunei sensu lato*, now cropping up across the country but annoyingly variable and difficult to distinguish from related species when young, as many of the plants are. I hope to come up with better guidance on the genus shortly.

Work continues too on our lycopods. The Northumbrian plants that had been thought to be *Diphasiastrum* ×*issleri* have now been re-assessed as atypical *D. alpinum* in a paper shortly to appear in *British and Irish Botany*. This effectively renders the taxon Regionally Extinct in England, the only definite finds being those from Gloucestershire in the 1880s. Its conservation status at the GB level remains unchanged as more Scottish populations have come to light. Also in Scotland, the careful researches of Roger Golding have, with the cytometric aid of Libor Ekrt, shown that we have diploid examples of *Huperzia*, as well as the common hexaploid that we can equate to *H. selago*. There has long been confusion over the identity and appropriate nomenclature of the somewhat distinctive boreal form(s) found in the Highlands and Islands. While these plants have in recent years been treated as *H. selago* subsp. *arctica*, it seems likely that they may better be placed in *H. appressa*, although some small plants from serpentine debris on Unst may indeed be what we should call *H. arctica*. Much more work is needed. The possibility that some Scottish montane examples of *Lycopodium annotinum*, or *Spinulum annotinum* if you prefer (for me the jury is still out!), would better be placed under the boreal subsp. *alpestre* – treated by North American authors as *Spinulum canadense* – is also currently being investigated. As with *Lycopodium clavatum* and *L. lagopus* (which I am increasingly regretting not retaining as a subspecies of *L. clavatum*) the distinctions never seem as clear as the books would have you believe!

The value of digital devices as recording tools, and social media as identification forums has become increasingly obvious in these difficult times. I am grateful to those of you using the latter for alerting me to various interesting finds over recent months. I fear we must wait until 2021 to find out if we have another site for *Polystichum* ×*lesliei*, as is suspected (possibly the only extant one?). One exciting *Asplenium* find (in 2021) must wait until next year's report, but I can tell of the exciting discovery by Roy Vickery of a thriving population of *Asplenium billotii* (*A. obovatum* subsp. *billotii*), on granite blockwork a stone's throw from Parliament Square, Westminster. The only other London site has regrettably long since been destroyed by the development of the King's Cross area.

photo: Fred Rumsey

***Asplenium billotii* – Westminster, 16th December 2020**

As always, my thanks to those of you who have sent me records and apologies to those of you whose exciting finds have not been reported here.

SPORE EXCHANGE ORGANISERS – Brian & Sue Dockerill

These statistics give an overview of the main Spore Exchange for 2020.

	2013	2014	2015	2016	2017	2018	2019	2020
No. taxa in list	374	441	503	459	452	405	402	384
No. orders received	99	115	98	96	135	155	164	146
No. packets supplied	1,548	2,015	1,703	1,568	2,331	2,486	2,664	2,324
No. first choices supplied (%)	1,276 (82%)	1,795 (89%)	1,526 (90%)	1,400 (90%)	2,024 (86%)	2,077 (83%)	2,220 (85%)	1,927 (83%)
No. donors	35	31	32	32	39	36	40	35

We are pleased to say that the Spore Exchange remains well supported by members. The use of the web-based ordering system is also popular, with over 90% of orders coming by that route. Because of the speedier arrival of orders, from the 2021 Exchange we will start picking orders a week after the list opens, rather than two weeks, which was originally to allow time for postage from overseas. Almost half the orders have already been received by the earlier date and this also spreads out our workload.

Many of our taxa are in short supply and this can mean some people get a very small proportion of their order. From 2021 we will be noting those that are in short supply so people are aware that this may happen.

We again supplied spores to the Seed Exchange of The Hardy Plant Society.

We continued to supply short viability spores separately, and the statistics for this are shown below.

	2016	2017	2018	2019	2020
No. taxa donated	9	11	11	13	13
No. donors	4	6	7	7	6
No. packets supplied	40	30	39	63	67

As always, we are very grateful to the spore donors, without whom there would be no Exchange. If anyone is interested in becoming a donor, we are very happy to offer advice, or they can look on the website for help.

PLANT EXCHANGE ORGANISERS – Brian & Sue Dockerill

The following gives some statistics for the current web-based scheme.

	2016	2017	2018	2019	2020
No. taxa available	32	22	62	44	48
No. donors	6	5	5	7	8
No. taxa wanted	19	25	41	49	67
No. requestors	5	8	13	15	18

The Plant Exchange continues to list a reasonable number of ferns, and many of these are requested – of the 48 available this year, 22 are not currently listed as they are used up. As last year, we feel this aspect of the system is working well, albeit on a moderate scale.

For plant wants, the number requested continues to rise, but with little evidence that plants are obtained this way. Overall, this aspect of the system is working less well, possibly because the plants requested do not seem to be available within the membership. We would encourage all members to look at this list and see whether they are able to meet the needs of their fellow members.

Both aspects of the Exchange are advertised in the Autumn Mailing and other communications, and with all spores sent out from the Spore Exchange.

We also offer to send out a paper list on request, and again one person took advantage of this.

There have been several recent changes to plant import and movement regulations and we will be considering how the Plant Exchange may be affected by these. We will ensure the website reflects the situation at the time.

BOOKSALES ORGANISER – Frank Katzer

The year 2020 was the quietest year for BPS Booksales since I took over in 2006. I acquired some copies of *Britain's ferns* by James Merryweather for Booksales, which are being sold for £15.00, but sales have been very slow because there have been no face-to-face meetings. Booksales had an income of £131.30 but made an overall loss of £250.77 due to the purchase of new books. As usual I will keep looking to acquire more books during the coming year and I would be grateful if you could let me know if you become aware of any new fern books before they are published so that I can contact the publishers in order to get a better deal for our members.

BPS Booksales will welcome donations and bequests of books or offers to purchase either individual books or whole book collections. Please keep in mind that the prices offered cannot be internet prices but if you sell books to dealers, they will not offer sales prices either. To contact me please use my work e-mail: Frank.Katzer@moredun.ac.uk or alternatively the Booksales e-mail: Booksales@eBPS.org.uk. I can also be contacted by post: Frank Katzer, Highfield House, Muirburn, Skirling, ML12 6HL, Scotland or by phone 0044 (0)1899 860 307.

BACK NUMBERS OF JOURNALS ORGANISER and SPECIAL PUBLICATIONS SALES – Pat Acock

I understand that during lockdown year we recruited a large number of new members. When I joined (over fifty years ago), I started to buy back numbers of our journals. In fact, that is how I ended up running the back numbers and, later, selling our Special Publications.

I recently spent a day trawling through all eight volumes of the *Bulletin* to research a piece for this issue. Do not be caught out by not catching up on the reasonable price of our back numbers; it is so much harder to track them down as second-hand copies later from dealers. Despite my appeal last year, we sold only a few *Bulletin* parts, one *Fern Gazette* and, as far as I can tell, no copies of the *Pteridologist.*

In contrast, our Special Publications broke new records, selling 13 copies of *Fern albums and related materials*, ten copies of the second edition of *Polystichum cultivars* and a few copies of most of our other volumes. But by far the best seller was *Polypodium cultivars and species*, with the last 33 of the first edition selling out and after many problems with the printing of the second edition we have now sold 51 copies of that all over the world, including to the Netherlands, Germany, Austria, USA, Thailand and Australia.

MERCHANDISE ORGANISERS – Bryan & Gill Smith

The year 2020 started off pretty quietly as usual, then Covid hit and we all went into lockdown in March. After the novelty of staying at home all day began to wear off, it seems that people turned to their computers for some entertainment – that's when the sales of merchandise suddenly took off!

Thereafter we had a fairly steady stream of orders – in a normal year we usually have about 25 orders via the website, in 2020 we had clocked up 75 by the end of December! We had orders from the USA, Netherlands, Belgium, Channel Isles, Australia, Germany and Ireland, as well as from many UK members. Thank you everyone for your orders and for giving us something to keep us occupied in these strange times! So that we didn't have to go to the Post Office regularly, we set up a Royal Mail account so we could pay postage online and produce our own labels for parcels. At the time of writing this report we have already had nine merchandise orders for January 2021, so it looks as if we will be kept busy for a while!

Fortunately, a lot of our merchandise suppliers were still working throughout the year so we were able to replenish stock when needed. Plus we added several more items to the already long list. We know many people still use matches, so there are three different types of match holders/boxes with fern motifs. We obtained more sets of small cards from a previous supplier, and added some larger cards of our own design introducing images of ferns created by one of our talented members using the cyanotype method. Another of our inspired members has made sets of fern nightlights that display coloured acrylic laser-engraved images of ferns – he is also using his laser to personalise garden trowels for us, which have been very popular so far! We also changed the style of our fern calendar for 2021 but sales have been very poor; it takes a lot of time and effort to put it together, so something for consideration – do we need to produce a calendar?

As there were no meetings or shows in 2020, we missed out on face-to-face sales, but as the Covid vaccines are being rolled out quickly, we are hoping that we will be able to see other members 'in the flesh' again before the end of 2021. We have had some really nice positive feedback about our range of Merchandise, but if you have ideas for any other items that you think would enhance our list, please contact us on merchandise@eBPS.org.uk.

HORTICULTURAL INFORMATION ADVISER – Matt Busby

I received no enquiries during 2020. Most enquiries of this type are now received and dealt with via the Society's website. Sadly I feel I must step down from this role.

ARCHIVIST – Michael Hayward

The archive is still open for business, despite lockdown restrictions. The great majority of requests can now be answered from the digital collection of data and images, created over the last few years. Requests that need an article to be physically retrieved will unfortunately have to wait until the museum staff are able to be back in their offices.

Conservation work was carried out during the year on the eight volumes of press clippings put together by Charles Druery. This is one of the most important collections in the archive. Each page of each album was cleaned and then the pages interleaved to reduce further deterioration. A few of the articles clipped from newspapers are quite acidic and have browned significantly, but the gardening and horticultural press fortunately used a better quality of paper, so their ephemera have survived remarkably well.

I am looking forwards to working once again with the staff of the Botany Department at the World Museum Liverpool, as soon as the current situation allows.

CULTIVAR REGISTRATION WORKING GROUP – Roger Golding

I am hoping to provide a first rough draft of a Register of *Polypodium* cultivars by the autumn for discussion; progress has been delayed again, this time by the publication of Martin Rickard's *Polypodium* book, which has introduced a number of new cultivars and new names for old cultivars! Once again, if anyone is interesting in helping with this project, please get in touch.

AWARDS

Honorary Membership – Martin Rickard

At the AGM in 2020 Honorary Membership was conferred on Martin Rickard for his services to the BPS and to pteridology.

Martin Rickard has been a member of the Society for over fifty years, having signed up in 1967, encouraged by his friend Tony Worland. He and Tony, both based in Cambridge, were keen to explore for ferns in the field and they organised a field meeting to Norfolk in 1969. Later that year they joined Jimmy Dyce on the meetings committee, and Martin has continued to be an enthusiastic meetings organiser and participant ever since, exploring Britain and Ireland, as well as many places overseas. He organised a very successful Centenary Fern Tour in 1991.

Throughout, Martin has shared his fern knowledge with others. His enthusiasm for ferns in the field is clearly shown in his first publication in the *British Fern Gazette* in 1972, on the distribution of *Woodsia* species in Britain. With the help of Clive Jermy he carried out his extensive research in the herbaria of 14 museums and botanic gardens to find past and present localities for these species, and the results led him to explore the more remote parts of Britain in all weathers, not only to re-find old records but also to establish one new one.

Perhaps for many Society members Martin is best known for his skills in fern growing and his knowledge and love of cultivars. From the beginning he and his then wife Hazel started growing a collection of ferns; they moved to Herefordshire with their young family, and having a bigger garden (and more rainfall) started a fern nursery in 1989, Rickards Hardy Ferns, largely as a hobby. Martin retired early in 1992 and the nursery developed exponentially, becoming a commercial enterprise well regarded in the horticultural world, with medals first at the RHS Malvern Show in 1991 and 1992, and from 1993-2002 winning ten consecutive gold medals at the prestigious RHS Chelsea Flower Show. During these years Rickards Hardy Ferns was awarded a total of 36 RHS Gold Medals from Chelsea, Malvern, Malvern Autumn, Hampton Court (plus the Tudor Rose Award for best in show in 1996), Tatton Park and Birmingham. Ferns in horticulture were firmly back on the map! In recognition Martin received the Veitch Memorial Medal from the RHS in 2002, for outstanding contribution to the advancement of the science and practice of horticulture. He has shared his expertise through several publications: *The plantfinder's guide to garden ferns* in 2000, *RHS Wisley Handbook: Ferns,* 2003, 2008, *Gardening with ferns* in 2005, and *The secret life of hardy ferns* in 2016, which won the 2016 European Garden Book Award.

Martin has made an enormous commitment to the running of the BPS. As well as an active member of the meetings committee he took on the reins of *Bulletin* editor from Jimmy Dyce in 1979, and in 1984 became the first editor of the Society's new journal, the *Pteridologist*, setting a high standard in publishing articles on a wide range of ferny topics, and he continued in this role until 1993, and then again from 2008-2010. He has also been on the Publications Committee for many years, and served as a Vice-President of the Society (1992-1997) and President (1997-2001). Martin was awarded the Stansfield Memorial Medal by the Society in 2004 for his invaluable services to the BPS.

Martin has contributed **four** of the Society's Special Publications, on *Polystichum* with Jimmy Dyce and Robert Sykes (2005, 2017), *Fern books* with Nigel Hall (2006) and *Fern albums* with Michael Hayward (2019); his most recent book, *Polypodium s.s. A review of all known cultivars and species worldwide* (2019, 2020), encompasses all aspects of the

genus, from the worldwide distribution of the wild species, their recognition, taxonomic complexities and inter-relationships, to the vast array of cultivars that have been recognised since some of the earliest collections. He has personally cultivated many species and cultivars of *Polypodium*, travelled widely to see plants in their native habitats, studied a wide range of historic and recent herbarium specimens, and corresponded extensively with many experts, thus gaining a unique understanding of the genus. This book perhaps best illustrates Martin's long passion for ferns, for sharing his knowledge, and his love of exploration. The Society has benefited enormously from this passion, and it is very fitting to award him Honorary Membership.

Mary Gibby

Honorary Membership – Alison Paul

At the AGM in 2020 Honorary Membership was conferred on Alison Paul for her services to the BPS and to pteridology.

Alison needs no introduction to the membership of the British Pteridological Society, not least because of her 13 years of service first as Assistant Secretary 1985-1991, then Membership Secretary (1992 - October 1997), during which time she came to personally know and correspond with so many of our long-term members. Her diverse roles within the Society, primarily through publications, have seen her serve continuously on the Committee since 1986 and in an extremely active role. I believe this is probably unparalleled, as is her knowledge of the Society, its rules and regulations and practical aspects around its running, which, as a past President and committee chair, I for one was extremely grateful for and I am sure many others would concur. When presenting Alison with her Outstanding Contribution Award in 2010, the then-President Robert Sykes described her as "the bedrock of the Society".

Having completed a degree in Horticultural Botany at Reading University, Alison came to work in the Fern Section of the Cryptogamic Herbarium at the Natural History Museum (then British Museum (Natural History)) in April 1979. Working under Clive Jermy, as fern curator she rapidly developed the 'upward management' skills still in use forty years later. Her role here as guardian of one of the most significant fern herbaria in the world has ensured that she is known to the academic fern community globally and very many will have cause to be very thankful to her for her efforts in arranging loans, supervising access and providing the necessary support on their visits here. Being based at what has effectively become the Society's home has seen Alison responsible for *de facto* dealing with much of the postal correspondence we used to receive and booking meetings, with all the necessary arrangements, for over three decades, a huge burden that she has shouldered without complaint.

While she has not ventured into press often, the accounts of the Pteridophyta in *The flora of Madeira* (1994), with Mary Gibby, and the extremely useful *Checklist of European pteridophytes* (1987), with Clive Jermy and Lewis Derrick, exemplify the meticulous attention to detail that has made her such an asset to the BPS as Assistant Editor of the *Bulletin* (1987-1989) and then Editor from 1990 to the present day.

If anyone can be considered a stalwart of the BPS it is Alison and I can think of no-one who works harder for the Society, or has done so unflinchingly for such a lengthy and sustained period. As a fortunate colleague and friend it gives me great pleasure to propose Alison for Honorary Membership, I can think of no one more fitting.

Fred Rumsey

OBITUARIES

MELVILLE THOMSON

1931 – 2020

Members of the North-West Group are mourning the loss of Melville Thomson. He was a Scot, born in Aberdeen and brought up in Denny near Falkirk. He studied Chemistry and Physics at Glasgow University and spent all his working life as a chemist making paper. He worked at various places but finished at Henry Cooke's paper mill at Beetham near Milnthorpe, Cumbria. He and his wife Nessie bought a house nearby in Arnside in 1968, where he lived for the rest of his life.

photo: Nigel King

Melville Thomson, 2014

They were keen gardeners and the garden at Mayfield was a delight – with quite a collection of ferns. This included a particularly fine *Polystichum setiferum* (Plumoso-multilobum Group) that he inherited from his grandfather, Murray Thomson, and which Julian Reed suggested should be given the cultivar name 'Murray Thomson'. (See Julian's article in the 2015 edition of the *Pteridologist* Vol. 6, Part 2, p. 139.) It had got its roots into a wall, but after an epic excavation it has been divided and is now in the gardens of at least ten happy owners.

Melville was a long-time member of the BPS (from 1998) and joined the North-West Group in its early days. He often came on meets, and can be seen in photographs usually ignoring the camera to talk to his neighbour. He was Group treasurer for a time and also composed several brain-teasing ferny puzzles for members to enjoy at the annual indoor meeting.

Largely self-taught, he became a bit of an expert on computers. He used his skills to produce the annual 'Proceedings' of the Westmorland Geological Society of which he was a member for around 47 years. It was not just text. In his hands it became a thing of beauty and information, with maps and graphics aplenty. He was one of about 20 members who were involved in detailed geological mapping of the Lindale – Witherslack area (2000-2005), which resulted in the final map being accepted and published by the British Geological Survey. This was a unique instance of an amateur geological society having a map accepted and published by the BGS.

A personal thank you. I edited *Polystichum cultivars* in Word, not a good choice, because with all the illustrations the computer was going very slowly or stopping altogether. I did not know how to lighten the megabyte load of those pictures; Melville did. I can't remember how he knew about my problem, but he invited me down, said it might take him a little while – and rang me next day to say the task was done. He loved tunnelling into a problem, was a skilled and gifted man – and was always and above all extremely kind.

He had not been well in recent years. He had been more or less chair-bound at home, hailed me from a wheelchair in our local grocer's shop and held court in that chair among friends at the wake of Frances Haigh. He may have been physically weak, but his mind was as sharp as ever. He was a lovely man. We will miss him.

Many thanks to Vic Parsons of the Westmorland Geological Society for contributing to the fourth paragraph.

Robert Sykes

FRANCIS (FAY) MANDT 1940 – 2020

Fay Mandt was a member of the Society from 1989. She enjoyed reading our journals and was a member of a group of friends in Germany who grew ferns. I was fortunate to meet Fay on the German Garden Tour led by Berndt Peters in 2006. Fay was asked along because of her love of ferns and to help, not that Berndt needed it, with English. With both of us having kissed the Blarney Stone we got along just fine. Fay helped me with German culture, which can be a little more formal than English and American, especially with the older people whose gardens we visited.

In 2010 we had a BPS field meeting in Ireland. Fay took the opportunity to visit her sister Claire there and they both attended the meeting. We had so much fun in the lovely setting of south-west Ireland.

During our German Garden Tour in October 2019, Berndt invited me to join him on a visit to Fay and her husband Karl at their home in Bonn. It was sad to see Fay so frail, but we were able to relive many happy memories of our times together, and she took us on a tour of her lovely garden and pointed out all the notable ferns.

It was sad to hear of her passing in August 2020. We send our sympathy to Karl and to their two sons, Brian and Desmond, and their families.

Pat Acock

JOHN (JACK) HUBERT 1934 – 2021

Jack Hubert was a very long-standing member of the BPS, joining in 1985. He lived for some time in Wilmington, near Dartford, and was a regular attender at meetings of the South-East and East Anglia Groups, although less so in recent times as his health declined. He was excellent company, a modest man who was nevertheless justifiably extremely proud of his daughter Kate, a naturalist who worked for BBC West on the scripts for some of David Attenborough's programmes as well as writing for one of the yacht monthlies while she travelled the world on a yacht.

Jack hosted a meeting of the South-East Group in 2003. We visited some very interesting sites located in unpromising semi-industrial areas of north Kent, including Shorne Woods Country Park. It was typical of his interest in the environment that he was involved in the planting schemes for the then new nearby shopping complex at Bluewater. On that occasion, his wife Joan provided a sumptuous tea, and we also enjoyed the company of their daughter Kate. We visited his garden several times, enjoying his hospitality and his ferns, although sadly usually at the end of a trip when time was limited. His enjoyable company and wide knowledge will be missed.

Paul Ripley & Pat Acock

IN MEMORIAM

We were also sorry to learn of the death of the following (date joined BPS in brackets):

Mr Harvey Shepherd of Bolton, Lancs. (2001). Harvey was a popular member and regular attendee at North-West Fern Group meetings and at Southport Flower Show. He was more of an alpine man really, but he loved his ferns and did one year – to his great satisfaction – win the Happiland Perpetual Challenge Trophy at Southport for the most Firsts in the fern classes. **Robert Sykes**

MEETINGS PROGRAMME 2021

Meetings Secretary: Bryan Smith
Meetings Subcommittee: Bruce Brown, Roger Golding, Nick Hards, Steve Munyard, Julian Reed, Martin Rickard, Paul Ripley, Fred Rumsey

PLEASE NOTE: It is hoped that the following events will take place but for up-to-date information on these and any other meetings, please see the BPS website. For general enquiries about meetings, contact the Meetings Secretary (Meetings@eBPS.org.uk).

Sat. 24 April	**AGM & talks - online via Zoom** **Contact the General Secretary in advance for joining details** (Secretary@eBPS.org.uk)
Sat. 19 - Sun. 20 June	***Plant Societies weekend - RHS Wisley, Surrey: BPS Stand** Contact: Jude Lawton
Sat. 24 - Sun. 25 July	***Fern and Carnivorous Plant Show - RHS Wisley, Surrey** Contact: Julian Reed
Thurs. 19 - Sun. 22 Aug.	***Southport Flower Show: BPS Stand** Contact: Alison Evans (President@eBPS.org.uk)
Sat. 25 - Sun. 26 Sept.	**Cultivar weekend - Kent & East Sussex gardens** Contacts: Julian Reed & Mark Border

** Event supported by, but not organised by, the BPS.*

REGIONAL MEETINGS

These meetings are open to all members, so if you are visiting one of the following areas you would be very welcome to join in. For details of meetings please see the BPS website or contact the regional organisers by e-mail, or by post enclosing a stamped addressed envelope.

Cornwall & Devon	Ian Bennallick, Lower Polmorla, St Wenn, Bodmin, Cornwall PL30 5PE Cornwall@eBPS.org.uk
East Anglia	Peter Blake, 14 Mill Hill Road, Norwich NR2 3DP EastAnglia@eBPS.org.uk
Manchester & N. Midlands	Mike Canaway ManchesterNorthMidlands@eBPS.org.uk
Midlands	*Not currently meeting*
North Wales	David Hill, 54 Grosvenor Avenue, Rhyl, Denbighshire LL18 4HB NorthWales@eBPS.org.uk
North-West England	Roger Golding, Fell View, Bowness-on-Solway, Cumbria CA7 5AF NorthWest@eBPS.org.uk
Scotland	Bridget Laue, 50 Liberton Brae, Edinburgh EH16 6AF; Scotland@eBPS.org.uk
South-East England	Julian Reed, 19a Northdown Road, Kemsing, Sevenoaks, Kent TN15 6SD & Peter Clare; SouthEast@eBPS.org.uk
S. Wales & Borders	Brian Dockerill, 19 Westfield Road, Glyncoch, Pontypridd, Mid-Glam., CF37 3AG; SouthWalesBorders@eBPS.org.uk
Wessex	Jo Basil, 14 Royden Lane, Boldre, Lymington, Hants. SO41 8PE & Andrew Leonard; Wessex@eBPS.org.uk
Yorkshire	Barry Wright, 130 Prince Rupert Drive, Tockwith, York, North Yorks. YO26 7PU; Yorkshire@eBPS.org.uk

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